TUNER/SOUND PROCESSOR

C-F5

SERVICE MANUAL

KENWOOD

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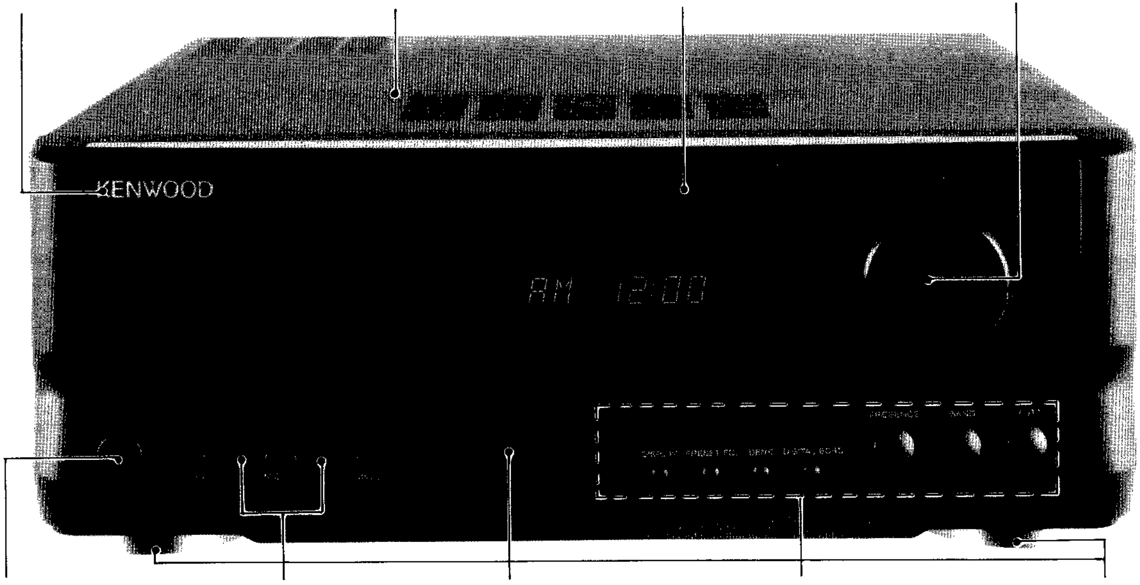
B51-5028-00(S) 4190


KENWOOD
AM 12:00

KENWOOD Badge
(B43-0301-04)

Metallic cabinet
(A01-3219-01)

Front glass
(B10-2095-12)

Knob
(K29-6111-14)

Knob(MIC MIXIING)
(K29-5839-14)

Miniature phone jack
(E11-0262-05)

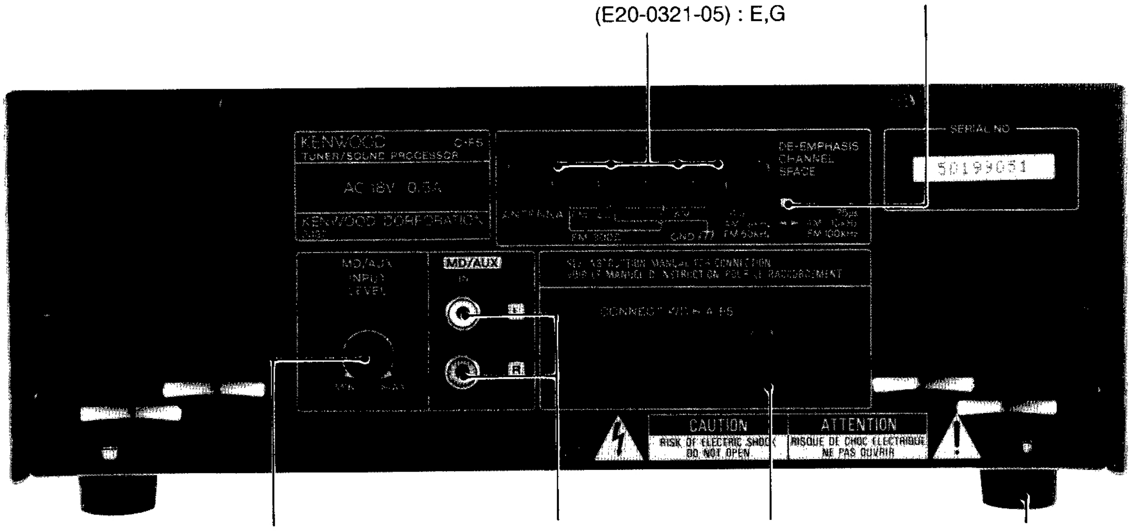
Panel
(A60-0711-21) : Y,M
(A60-0712-21) : K,R,P,X,E,G

Knob
(K29-6108-02) : Y,M
(K29-6109-02) : K,R,P,X,E,G

Escutcheon × 2
(B07-2268-14)

Lock terminal board
(E20-0476-05) : K,R,P,X,Y,M
(E20-0321-05) : E,G

Slide switch
(S62-0034-05) : Y,M


KENWOOD C-F5
TUNER/SOUND PROCESSOR
AC 18V 0.5A
KENWOOD CORPORATION
DE-EMPHASIS
CHANNEL
SPACE
SERIAL NO.
ANTENNA
MD/AUX
INPUT
LEVEL
MD/AUX
IN
CONNECT WITH A-F5
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
ATTENTION
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR

Variable resistor
(R31-0002-05) : Y,M,X,E,G

Phono jack(2P)
(E63-0068-15)

Rectangular receptacle(19P)
(E58-0006-05)

Foot(Rear)
(J02-0366-15) × 2

PRECAUTIONS FOR REPAIR

C-F5 does not have a power supply transformer. Use **A-F5, A-F7** or **PS-94UA** power supply to supply power.

TUNER/SOUND PROCESSOR

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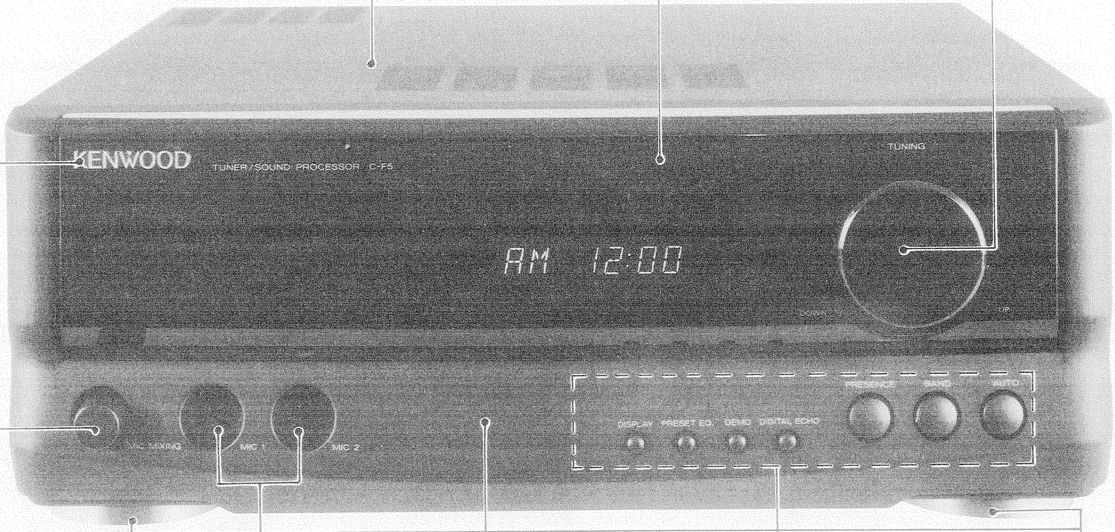
KENWOOD
TUNER/SOUND PROCESSOR C-F5
TUNING
AM 12:00
MIC MIXING
MIC 1
MIC 2
DISPLAY
PRESET EQ
DEMO
DIGITAL ECHO
PRESENCE
BAND
AUTO

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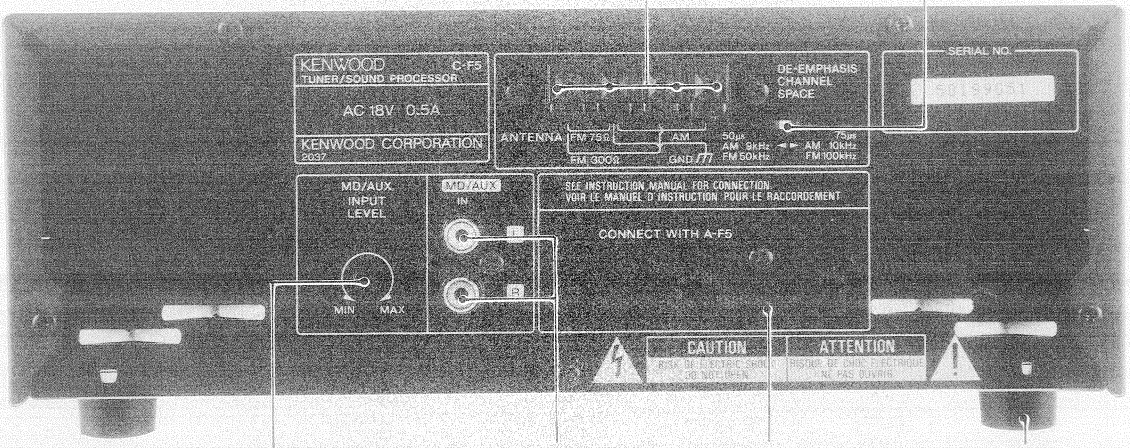
KENWOOD C-F5
TUNER/SOUND PROCESSOR
AC 18V 0.5A
KENWOOD CORPORATION
ANTENNA
FM 75Ω
AM
FM 300Ω
GND
DE-EMPHASIS
CHANNEL
SPACE
50μs
AM 9kHz
FM 50kHz
75μs
AM 10kHz
FM 100kHz
SERIAL NO.
MD/AUX
INPUT
LEVEL
MIN
MAX
MD/AUX
IN
L
R
SEE INSTRUCTION MANUAL FOR CONNECTION
VOIR LE MANUEL D'INSTRUCTION POUR LE RACCORDEMENT
CONNECT WITH A-F5
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
ATTENTION
RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR

Variable resistor
(R31-0002-05) : Y,M,X,E,G

Phono jack(2P)
(E63-0068-15)

Rectangular receptacle(19P)
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Foot(Rear)
(J02-0366-15) × 2

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C-F5 does not have a power supply transformer. Use **A-F5, A-F7** or **PS-94UA** power supply to supply power.

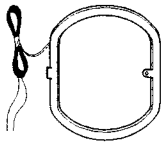
785

CONTENTS

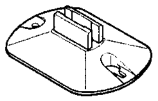
ACCESSORIES 2
CONTROLS 3
REMOTE CONTROL UNIT 4
BLOCK DIAGRAM 5
CIRCUIT DESCRIPTION 6
ADJUSTMENT/AJUSTES 11
WIRING DIAGRAM 13
PC BOARD 15
SCHEMATIC DIAGRAM 19
EXPLODED VIEW 27
PARTS LIST 28
SPECIFICATIONS .... BACK COVER

Accessories (Speaker cords are packed with the Speakers. All other accessories are packed with the Tuner unit.)

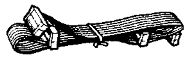
AM loop antenna assy (1)
(T90-0195-05)



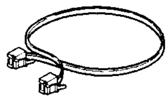
Loop antenna stand
(J19-3645-05)



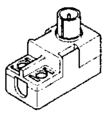
Parallel cord (Thick :1, Thin :1)
(E30-2738-05)



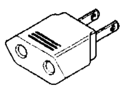
(E35-1063-05) C-F7 only



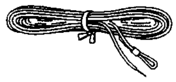
Antenna adaptor (1)
(T90-0198-05)
TEG type only



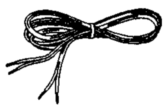
AC plug adaptor (1)
(E03-0115-05)
M type only



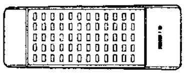
FM indoor antenna (1)
(T90-0801-05)



Speaker cord (2)
(E30-5120-08)

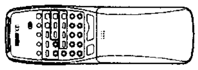


Remote control unit (1)
(A70-1015-05 : RC-F5)



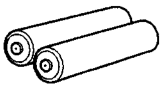
Battery cover: (A09-0106-08)

(X94-1070-00 : RC-F7)



Battery cover: (F07-0721-33)

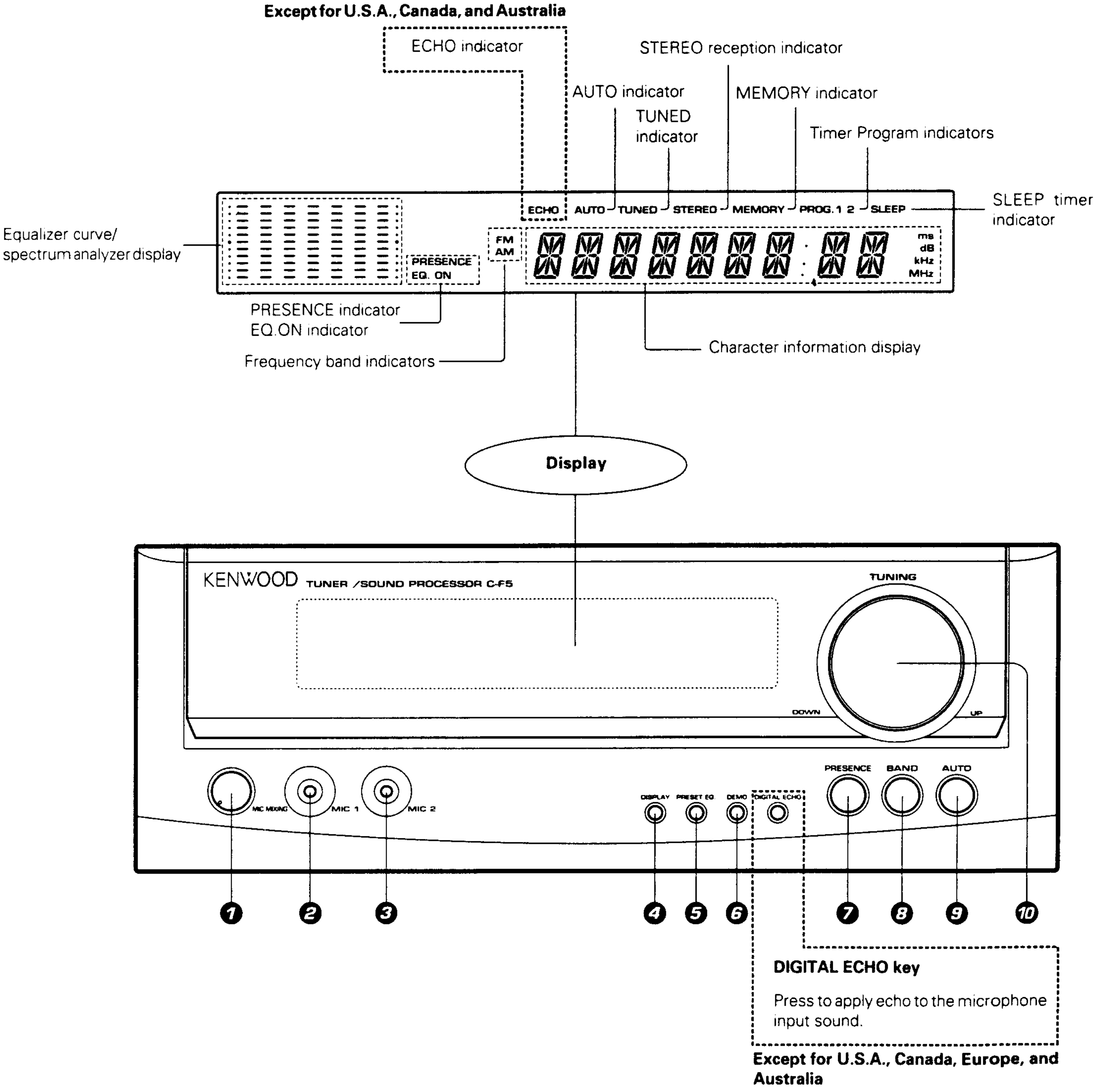
Batteries (R6/AA) (2) ... RC-F5
(R03/AAA) (2) ...RC-F7



System configuration (For parts no. of INSTRUCTION MANUAL, refer to the list on Back cover.)

System	Amplifier	Tuner	CD Player	Deck	Speaker	System Carton Box (Parts Mo.)
UD-703	A-F7	C-F7	DP-F7	X-F7	LS-F5 (KP) / LS-F7 (Other)	--
UD-753	A-F7	C-F7	DP-MF7	X-F7	LS-F5 (KP) / LS-F7 (Other)	H60-0307-04 (K) / H60-0306-04 (PR)
UD-713	A-F7	C-F7	DP-F7	X-F7	LS-F7	H60-0304-04
UD-763	A-F7	C-F7	DP-MF7	X-F7	LS-F7	H60-0343-04
UD-503	A-F5	C-F5	DP-F7	X-F5	LS-F5	--
UD-553	A-F5	C-F5	DP-MF7	X-F5	LS-F5	H60-0309-04 (K) / H60-0308-04 (PR)
UD-613	A-F5	C-F5	DP-F7	X-F5	LS-F5	H60-0305-04
UD-663	A-F5	C-F5	DP-MF7	X-F5	LS-F5	H60-0344-04

CONTROLS


Except for U.S.A., Canada, and Australia
ECHO indicator
STEREO reception indicator
AUTO indicator
MEMORY indicator
TUNED indicator
Timer Program indicators
SLEEP timer indicator
Equalizer curve/ spectrum analyzer display
ECHO
AUTO
TUNED
STEREO
MEMORY
PROG. 1 2
SLEEP
FM
AM
PRESENCE
EQ. ON
ms
dB
kHz
MHz
PRESENCE indicator
EQ.ON indicator
Frequency band indicators
Character information display
Display
KENWOOD TUNER /SOUND PROCESSOR C-F5
TUNING
DOWN
UP
MIC MIXING
MIC 1
MIC 2
DISPLAY
PRESET EQ
DEMO
DIGITAL ECHO
PRESENCE
BAND
AUTO
❶
❷
❸
❹
❺
❻
❼
❽
❾
❿

DIGITAL ECHO key

Press to apply echo to the microphone input sound.

Except for U.S.A., Canada, Europe, and Australia

❶ **MIC MIXING control**
Turn to adjust the microphone input volume.

❷ **MIC 1 jack**

❸ **MIC 2 jack**

❹ **DISPLAY key**
Press to change over the display contents.

❺ **PRESET EQ. key**
Press to apply an equalizer pattern matching the category of the music being played.

❻ **DEMO key**
Press to start demonstration.

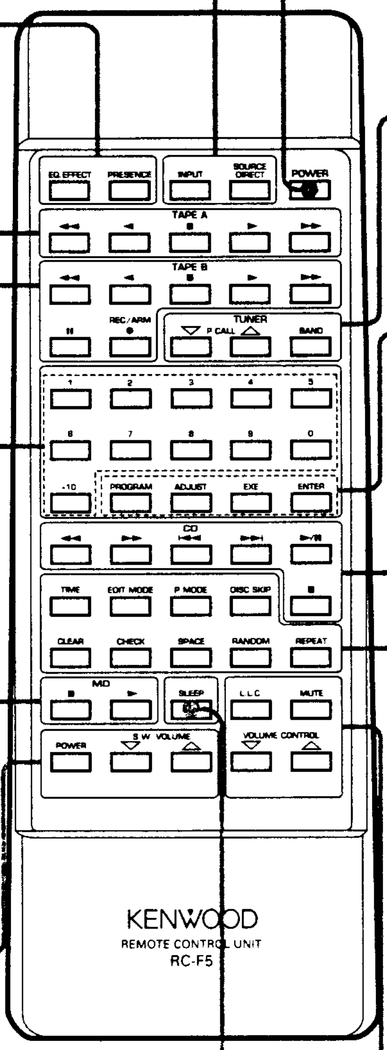
❼ **PRESENCE key**
Press for presence play.

❽ **BAND key**
Press to select the required frequency band.

❾ **AUTO key**
Press to receive stations in auto tuning mode.

❿ **TUNING knob**
Press to select the station to be received.

REMOTE CONTROL UNIT


EQ. EFFECT
PRESENCE
INPUT
SOURCE DIRECT
POWER
TAPE A
TAPE B
REC/ARM
TUNER
P CALL
BAND
1
2
3
4
5
6
7
8
9
0
+10
PROGRAM
ADJUST
EXE
ENTER
CD
TIME
EDIT MODE
P MODE
DISC SKIP
CLEAR
CHECK
SPACE
RANDOM
REPEAT
MD
SLEEP
L.L.C
MUTE
POWER
S.W. VOLUME
VOLUME CONTROL
KENWOOD
REMOTE CONTROL UNIT
RC-F5

Graphic equalizer operation keys
EQ.EFFECT: Press to select a graphic equalizer effect.
PRESENCE: Press to select a presence effect.

TAPE operation keys
These keys perform the same operations as the corresponding keys on the cassette deck. However, operations requiring simultaneous pressing of two keys are not possible.

Numeric keys
Function as the numeric keys of the CD player when the CD input is selected.
Function as the numeric keys of the tuner when the TUNER input is selected.

MD operation keys
For use when operating the MD (optional).
■ key and ► key

Super woofer keys
Use these keys to operate a super woofer (optional).
S.W. VOLUME
:Press to adjust the volume of the super woofer (optional).
POWER
:Press to switch the power of the super woofer (optional).

Input selector key
INPUT key: Press to select the component to be played.
SOURCE DIRECT key

POWER key

Tuner operation keys
BAND key, P.CALL keys (△,▽)

TIMER OPERATION keys
PROGRAM key, ADJUST key, EXE. key, ENTER key

CD player basic operation keys
◄◄ and ►► keys, I◄◄ and ►►I keys, ■ key, ►/II key

TIME	:Press to switch the time display mode.
EDIT MODE	:Press to select the edit recording mode.
P.MODE	:Press for program playback.
***DISC SKIP**	:Press to choose a disc.
CLEAR	:Press to clear the contents of a program.
CHECK	:Press to display the programmed contents in order.
SPACE	:Press to leave non-recorded spaces of a few seconds between the programmed tracks.
RANDOM	:Press to start random playback.
REPEAT	:Press to start repeated playback.

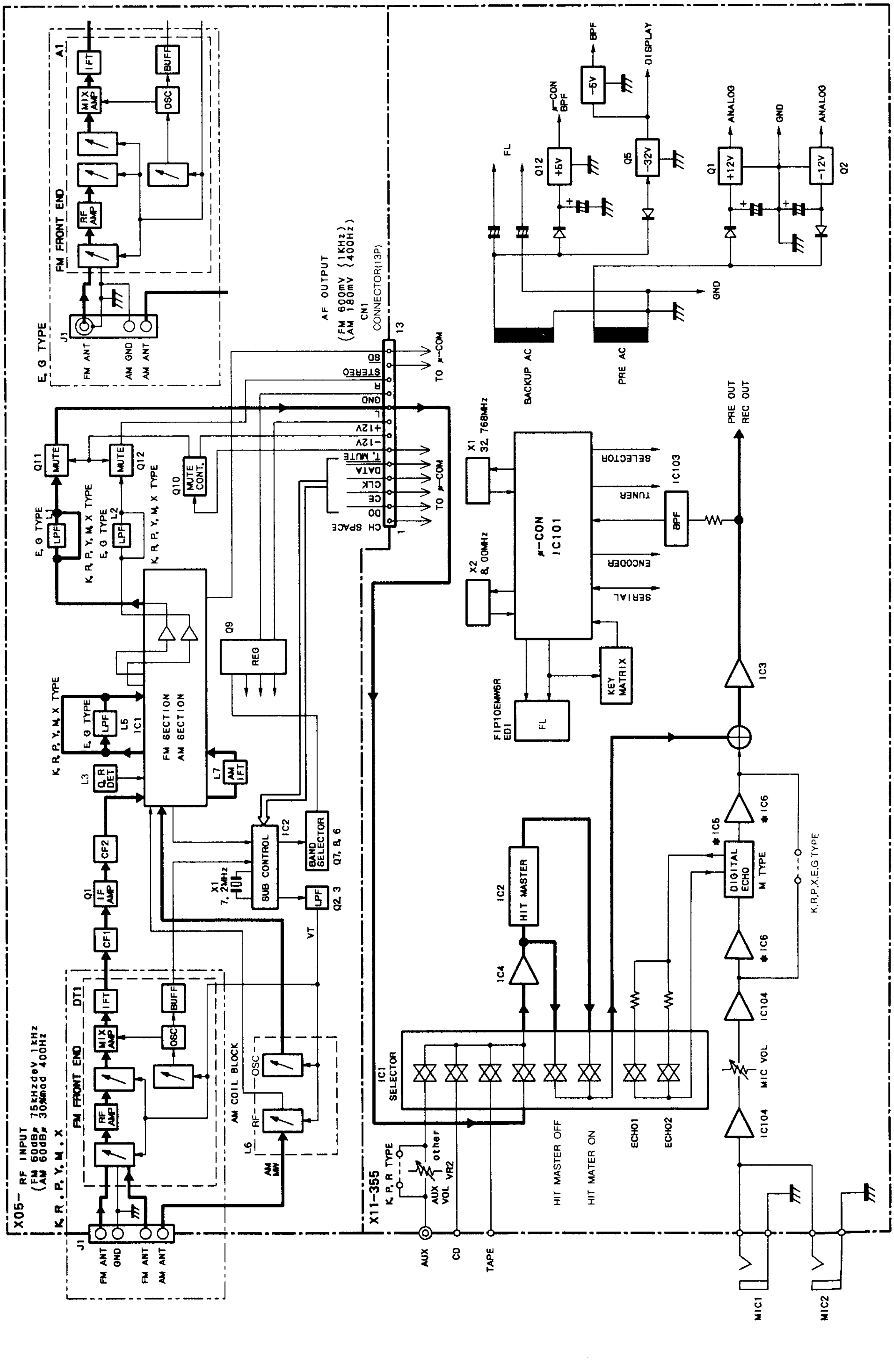
* The DISC SKIP key is for use with the UD-663 system.

SLEEP key

L.L.C. key
Press to set the volume at a level appropriate for quiet listening.
VOLUME CONTROL keys
Press to adjust the overall volume.
When these keys are pressed, the current volume level is displayed on the amplifier unit.
MUTE key
Press to mute the sound temporarily.

Model: RC-F5
Infrared ray system

BLOCK DIAGRAM


X05- RF INPUT (FM 60dBμ 75kHzdev 1kHz / AM 60dBμ 30%mod 400Hz)
K, R, P, Y, M, X
J1
FM ANT
GND
FM ANT
AM ANT
FM FRONT END
DT1
RF AMP
MIX AMP
IFT
OSC
BUFF
AM COIL BLOCK
L6
RF
OSC
AM MW
CF1
Q1
IF AMP
CF2
L3
Q.R DET
FM SECTION
AM SECTION
IC1
L7
AM IFT
L5
LPF
E, G TYPE
K, R, P, Y, M, X TYPE
X1
7.2MHz
SUB CONTROL
IC2
BAND SELECTOR
Q7, & 6
LPF
Q2, 3
VT
Q9
REG
L2
L1
Q10
MUTE CONT.
Q11
Q12
MUTE
E, G TYPE
J1
FM ANT
AM GND
AM ANT
A1
AF OUTPUT (FM 600mV (1kHz) / AM 180mV (400Hz))
CN1
CONNECTOR(13P)
13
SD
STEREO
R
GND
L
+12V
-12V
T. MUTE
DATA
CLK
CE
DO
CH SPACE
1
TO μ-COM
X11-355
K, P, R TYPE
other
AUX VOL VR2
AUX
CD
TAPE
IC1
SELECTOR
HIT MASTER OFF
HIT MATER ON
ECHO1
ECHO2
IC4
IC2
HIT MASTER
IC104
MIC VOL
IC104
✱IC6
✱IC5
DIGITAL ECHO
M TYPE
K,R,P,X,E,G TYPE
IC3
PRE OUT
REC OUT
BPF
IC103
X1
32.768kHz
X2
8.00MHz
μ-CON
IC101
SELECTOR
TUNER
ENCODER
SERIAL
KEY MATRIX
FIP10EMM6R
ED1
FL
BACKUP AC
PRE AC
GND
FL
Q12
+5V
μ-CON BPF
-6V
BPF
Q5
-32V
DISPLAY
Q1
+12V
ANALOG
GND
-12V
ANALOG
Q2
MIC1
MIC2

CIRCUIT DESCRIPTION

1. Test mode

1-1. Initial setting

- When AC power cord is plugged while pressing the AUTO key, equipment is initialized.

1-2. Test mode with the main unit keys

(1) Setting procedure

While pressing the BAND key, plug the AC power cord to the power outlet.

(2) Cancellation

Unplug the AC power cord. The initial setting will take effect and the test mode will be canceled.

(3) Description

1. Auto POWER ON

- When AC power cord is plugged while pressing the BAND key, the POWER will turn ON and all function will be at the initial setting. (Input selector = TUNER)

2. ALL LED ON mode

- When the AC power cord is plugged while pressing the BAND key, all the LEDs will turn ON.
- When some main unit key is pressed, ALL LED ON mode will be canceled and all function will return the LEDs to normal.

3. Others

- The operation of main unit keys and remote controller keys during the test mode, refer to the table below.
- The MUTE function does not work during the test mode. (When POWER ON , MUTE is effective.)
- Test mode is not canceled when the input selector is moved TUNER to another source.

Key	Description	
	Selector : TUNER	**Selector : Except for TUNER**
1. BAND	Normal operation	CENTER LEVEL 0dB →+10dB → -10dB
2. DIGITAL ECHO	Normal operation	
3. PRESENCE	P.CALL DOWN	Normal operation
4. PRESET EQ.	P.CALL UP	Normal operation
5. DEMO	TUNER →TAPE→ MD/AUX→ CD	
6. TUNING UP/DOWN	Normal operation	
7. AUTO	Normal operation	REAR LEVEL 0dB →+10dB → -10dB
8. DISPLAY	Normal operation	ALL LED ON ↔OFF

CIRCUIT DESCRIPTION

1-3 Backup operation

The receiver microcomputer goes into backup mode when the AC power goes off. Therefore, the last state when the power was turned off is stored the next time the power is turned on.

1) Backup mode

Each 1 ms, the receiver microcomputer checks the CE port and if CE=low , it goes into backup mode. When it goes into backup mode, it carries out the series of operations below, then stops the main clock (8.38MHz) and the sub clock(32kHz). It does not come out of backup mode until a reset is input.

2) Operations upon entry into backup mode

- Interrupts inhibited
- Mute on
- Fluorescent display drive stopped
- A/D stopped
- SIO stopped
- Interrupt enable flags all cleared
- Hard timer stopped
- Port data set to all 0s
- Port mode set
  (Setting the input ports to input mode and the input/output port and the output ports to output mode is easy.)
- Data set in backup check RAM(cleared in test mode)
- Main clock stopped (to go into stop mode)

3) Data restoration upon reset

When the system is reset, if the backup check RAM value matches the value set when the system went into backup mode, then the modes below are restored.

-AMP-

- PRESET EQ. and Presence modes
- DOLBY PRO LOGIC mode
- DOLBY 3 STEREO mode
- CENTER mode
- CENTER LEVEL
- REAR LEVEL
- DELAY TIME
- Last clock data
  (However, the clock is not counted and the last time data blinks.)
- Program setting contents and setting mode

-TUNER-

- Last band and preset channels and frequencies
- Last frequency and preset channels for each band
- Preset memory data (Ch. 1 - Ch. 40)
- AUTO/MONO mode

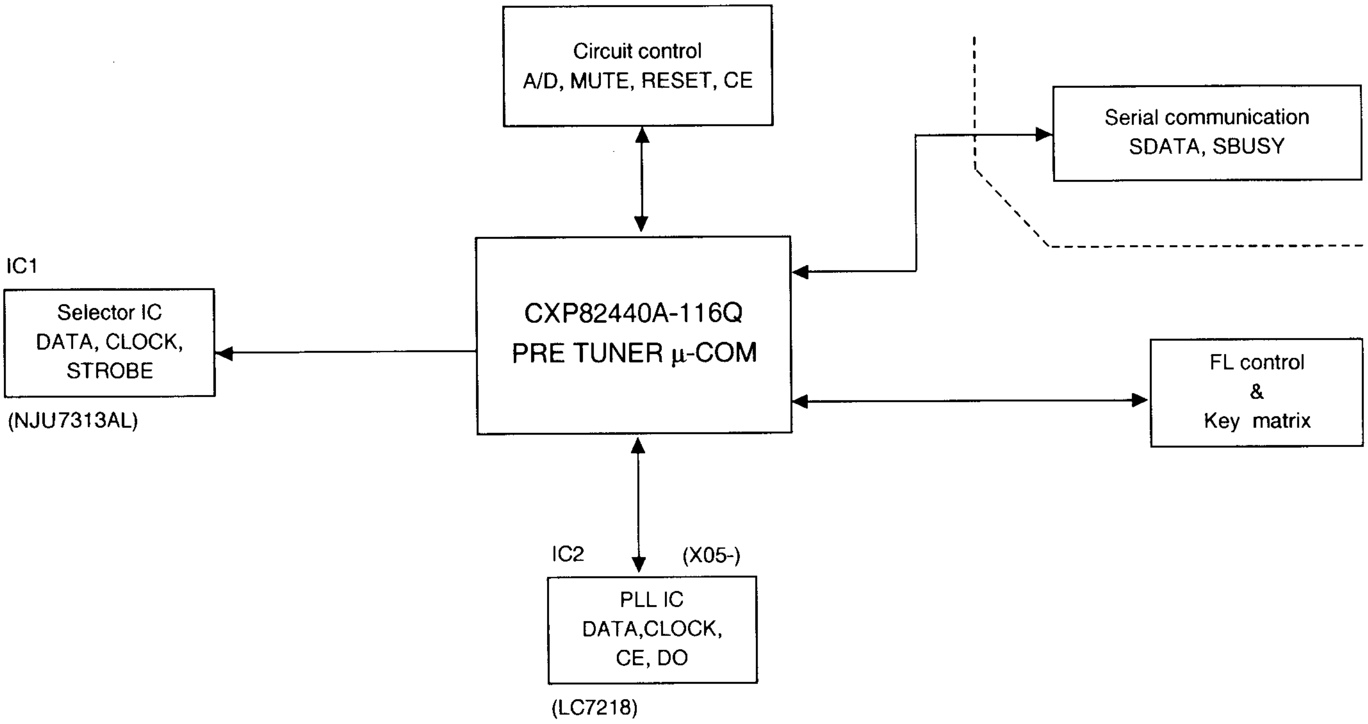
Default states

Clock Prog.	Clock stop (12:00 a.m.) Prog. operation mode : OFF Prog. 1 : ON=12:00AM OFF=12:00AM MOD=PLAY SOC=TUNER (ch 1) Prog. 2 : ON=12:00AM OFF=12:00AM MOD=PLAY SOC=TUNER (ch 1)
Amp	Selector : TUNER PRESET EQ.:OFF PRESENCE:OFF PROLOGIC:OFF 3 STEREO:OFF CENTER MODE:NORMAL CENTER LEVEL:0 REAR LEVEL:0 DELAY TIME:20ms TEST TONE:OFF
Tuner	Band : FM Last band FM : P.CH= --CH FREQ=min (76.0 MHz or 87.5 MHz) AM(MW): P.CH= --CH FREQ=min (530 kHz or 531 kHz) LW : P.CH= --CH FREQ=min (153kHz) P.CH memory Ch. 1 - Ch.40 : Test frequency Tuning mode : AUTO (AUTO STEREO)

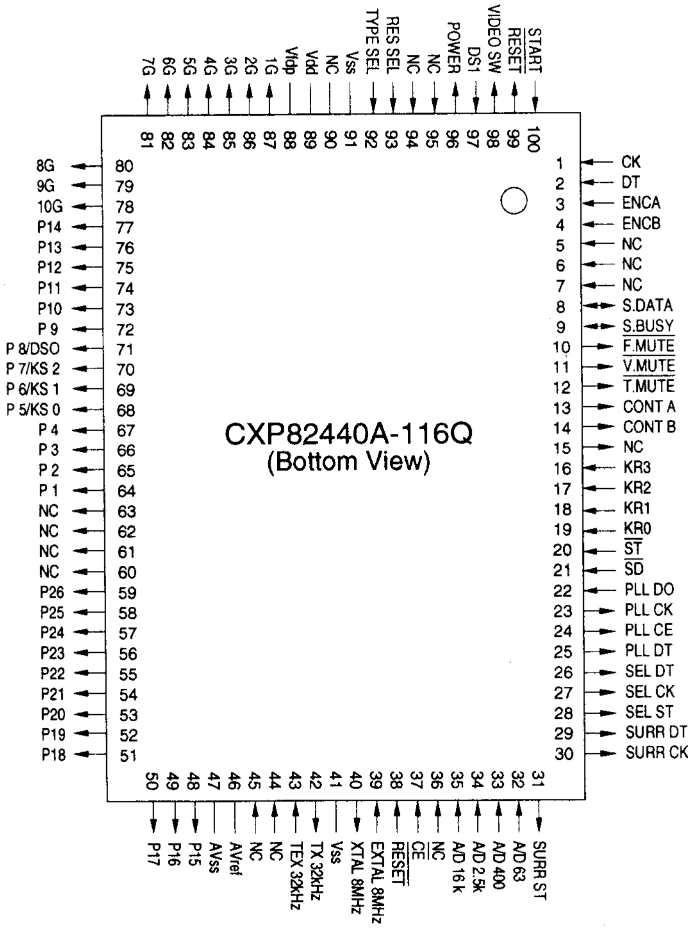
CIRCUIT DESCRIPTION

2. Microprocessor : CXP82440A-116Q (X11 : IC101)

2-1. Block diagram


Circuit control
A/D, MUTE, RESET, CE
Serial communication
SDATA, SBUSY
IC1
Selector IC
DATA, CLOCK,
STROBE
(NJU7313AL)
CXP82440A-116Q
PRE TUNER µ-COM
FL control
&
Key matrix
IC2
(X05-)
PLL IC
DATA,CLOCK,
CE, DO
(LC7218)

2-2. Pin layout


CXP82440A-116Q
(Bottom View)
1 CK
2 DT
3 ENCA
4 ENCB
5 NC
6 NC
7 NC
8 S.DATA
9 S.BUSY
10 F.MUTE
11 V.MUTE
12 T.MUTE
13 CONT A
14 CONT B
15 NC
16 KR3
17 KR2
18 KR1
19 KR0
20 ST
21 SD
22 PLL DO
23 PLL CK
24 PLL CE
25 PLL DT
26 SEL DT
27 SEL CK
28 SEL ST
29 SURR DT
30 SURR CK
31 SURR ST
32 A/D 63
33 A/D 400
34 A/D 2.5k
35 A/D 16 k
36 NC
37 CE
38 RESET
39 EXTAL 8MHz
40 XTAL 8MHz
41 Vss
42 TX 32kHz
43 TEX 32kHz
44 NC
45 NC
46 AVref
47 AVss
48 P15
49 P16
50 P17
51 P18
52 P19
53 P20
54 P21
55 P22
56 P23
57 P24
58 P25
59 P26
60 NC
61 NC
62 NC
63 NC
64 P 1
65 P 2
66 P 3
67 P 4
68 P 5/KS 0
69 P 6/KS 1
70 P 7/KS 2
71 P 8/DSO
72 P 9
73 P10
74 P11
75 P12
76 P13
77 P14
78 10G
79 9G
80 8G
81 7G
82 6G
83 5G
84 4G
85 3G
86 2G
87 1G
88 Vfdp
89 Vdd
90 NC
91 Vss
92 TYPE SEL
93 RES SEL
94 NC
95 NC
96 POWER
97 DS1
98 VIDEO SW
99 RESET
100 START

CIRCUIT DESCRIPTION

2-3. Pin description

No.	Name	I/O	Description	No.	Name	I/O	Description
1	CK	I	LC6543H-4600 CLOCK	50	P17	O	FL SEGMENT (P17)
2	DT	I	LC6543H-4600 DATA	51	P18	O	FL SEGMENT (P18)
3	ENCA	I	ROTARY ENCODER A SIGNAL	52	P19	O	FL SEGMENT (P19)
4	ENCB	I	ROTARY ENCODER B SIGNAL	53	P20	O	FL SEGMENT (P20)
5-6	NC	I	NOT USED	54	P21	O	FL SEGMENT (P21)
7	NC	I	16K ADJUST MODE	55	P22	O	FL SEGMENT (P22)
8	S.DATA	I/O	SERIAL DATA	56	P23	O	FL SEGMENT (P23)
9	S.BUSY	I/O	SERIAL BUSY	57	P24	O	FL SEGMENT (P24)
10	$\overline{\text{F.MUTE}}$	O	FRONT MUTE (H:MUTE OFF, L:MUTE ON)	58	P25	O	FL SEGMENT (P25)
11	$\overline{\text{V.MUTE}}$	O	VIDEO MUTE (H:MUTE OFF, L:MUTE ON)	59	P26	O	FL SEGMENT (P26)
12	$\overline{\text{T.MUTE}}$	O	TUNER MUTE (H:MUTE OFF, L:MUTE ON)	60-63	NC	O	NOT USED
13	CONT A	O	CONT A DATA	64	P1	O	FL SEGMENT (P1)
14	CONT B	O	CONT B DATA	65	P2	O	FL SEGMENT (P2)
15	NC	O	NOT USED	66	P3	O	FL SEGMENT (P3)
16	KR 3	I	KEY RETURN 3	67	P4	O	FL SEGMENT (P4)
17	KR 2	I	KEY RETURN 2	68	P5/KS 0	O	FL SEGMENT (P5) / KEY SCAN 0
18	KR 1	I	KEY RETURN 1	69	P6/KS 1	O	FL SEGMENT (P6) / KEY SCAN 1
19	KR 0	I	KEY RETURN 0	70	P7/KS 2	O	FL SEGMENT (P7) / KEY SCAN 2
20	$\overline{\text{ST}}$	I	STEREO / MONORAL (H:MONORAL, L:STEREO)	71	P8/DS 0	O	FL SEGMENT (P8) / KEY SCAN 3
21	$\overline{\text{SD}}$	I	SD SIGNAL (H:NO TUNED, L:TUNED)	72	P9	O	FL SEGMENT (P9)
22	PLLDO	I	LC7218 DO	73	P10	O	FL SEGMENT (P10)
23	PLLCK	O	LC7218 CLOCK	74	P11	O	FL SEGMENT (P11)
24	PLLCE	O	LC7218 CE	75	P12	O	FL SEGMENT (P12)
25	PLLDT	O	LC7218 DATA	76	P13	O	FL SEGMENT (P13)
26	SELDT	O	NJU7311AL / NJU7313AL DATA	77	P14	O	FL SEGMENT (P14)
27	SELCK	O	NJU7311AL / NJU7313AL CLOCK	78	10G	O	FL GRID (10G)
28	SELST	O	NJU7311AL / NJU7313AL STROBE	79	9G	O	FL GRID (9G)
29	SURRDT	O	LA1010N / LA2785 DATA	80	8G	O	FL GRID (8G)
30	SURRCK	O	LA1010N / LA2785 CLOCK	81	7G	O	FL GRID (7G)
31	SURRST	O	LA1010N / LA2785 STROBE	82	6G	O	FL GRID (6G)
32	A/D	I	SPE-ANA INPUT 63Hz	83	5G	O	FL GRID (5G)
33	A/D	I	SPE-ANA INPUT 400Hz	84	4G	O	FL GRID (4G)
34	A/D	I	SPE-ANA INPUT 2.5kHz	85	3G	O	FL GRID (3G)
35	A/D	I	SPE-ANA INPUT 16kHz	86	2G	O	FL GRID (2G)
36	NC	I	NOT USED	87	1G	O	FL GRID (1G)
37	$\overline{\text{CE}}$	I	μ-COM CHIP ENABLE (H:ENABLE, L:DISABLE)	88	Vfdp		-30V (μ–COM POWER SUPPLY)
38	$\overline{\text{RESET}}$	I	RESET (μ-COM HARD RESET)	89	Vdd		+5V (μ–COM POWER SUPPLY)
39	EXTAL	I	8MHz CERAMICS	90	NC		NOT USED
40	XTAL	O	8MHz CERAMICS	91	Vss		GND (μ-COM POWER SUPPLY)
41	Vss		GND (μ-COM POWER SUPPLY)	92	TYPE SEL	I	MODEL DETECTION (H:C-F7, L:C-F5)
42	TX	O	32.768 kHz CRYSTAL	93	RES SEL	I	16kHz RESONANCE (H:NORMAL, L: 16 kHz RESONANCE)
43	TEX	I	32.768 kHz CRYSTAL	94-95	NC	I	NOT USED
44-45	NC	I	NOT USED	96	POWER	O	POWER (H:POWER ON, L:POWER OFF)
46	AVref		+5V (A/D REFERENCE VOLTAGE)	97	DS1	I	DIODE SWITCH 1
47	AVss		GND (A/D REFERENCE VOLTAGE)	98	VIDEOSW	O	VIODE SWITCH (H:VIDEO2, L:VIDEO1)
48	P15	O	FL SEGMENT (P15)	99	$\overline{\text{RESET}}$	O	LC6543H-4600 RESET
49	P16	O	FL SEGMENT (P16)	100	START	I	LC6543H-4600 START

CIRCUIT DESCRIPTION

3. Test frequency

	K		E	
	K1 (1700)	K2(1610)	With LW	Without LW
1	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
2	FM 98.0MHz	FM 98.0MHz	FM 98.0MHz	FM 98.0MHz
3	FM 108.0MHz	FM 108.0MHz	FM 108.0MHz	FM 108.0MHz
4	AM 630kHz	AM 630kHz	MW 630kHz	MW 630kHz
5	AM 990kHz	AM 990kHz	MW 990kHz	MW 990kHz
6	AM 1440kHz	AM 1440kHz	MW 1440kHz	MW 1440kHz
7	FM 87.5MHz	FM 87.5MHz	LW 162kHz	FM 87.5MHz
8	FM 87.5MHz	FM 87.5MHz	LW 216kHz	FM 87.5MHz
9	FM 87.5MHz	FM 87.5MHz	LW 270kHz	FM 87.5MHz
10	FM 89.1MHz	FM 89.1MHz	FM 89.1MHz	FM 89.1MHz
11	FM 88.0MHz	FM 88.0MHz	FM 88.0MHz	FM 88.0MHz
12	FM 90.0MHz	FM 90.0MHz	FM 90.0MHz	FM 90.0MHz
13	FM 97.5MHz	FM 97.5MHz	FM 97.5MHz	FM 97.5MHz
14	FM 98.5MHz	FM 98.5MHz	FM 98.5MHz	FM 98.5MHz
15	FM 106.0MHz	FM 106.0MHz	FM 106.0MHz	FM 106.0MHz
16	AM 530kHz	AM 530kHz	MW 531kHz	MW 531kHz
17	AM 1000kHz	AM 1000kHz	MW 999kHz	MW 999kHz
18	AM 1700kHz	AM 1610kHz	MW 1602kHz	MW 1602kHz
19	FM 87.5MHz	FM 87.5MHz	LW 153kHz	FM 87.5MHz
20	FM 87.5MHz	FM 87.5MHz	LW 279kHz	FM 87.5MHz
21	FM 96.3MHz	FM 96.3MHz	FM 96.3MHz	FM 96.3MHz
22	FM 107.0MHz	FM 107.0MHz	FM 107.0MHz	FM 107.0MHz
23	AM 900kHz	AM 900kHz	AM 900kHz	AM 900kHz
24	AM 1350kHz	AM 1350kHz	AM 1350kHz	AM 1350kHz
25	FM 87.5MHz	FM 87.5MHz	LW 225kHz	FM 87.5MHz
26	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
27	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
28	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
29	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
30	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
31	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
32	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
33	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
34	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
35	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
36	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
37	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
38	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
39	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz
40	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz	FM 87.5MHz

ADJUSTMENT/AJUSTES

X05-4532-74(E,G type)

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTNIG	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION SELECTOR : FM							
1	DISCRIMINATOR	(A) 98.0MHz 1kHz, ±40kHz dev 60dBμ(ANT input)	Connect a DC voltmeter between TP3 and TP4. (X05-)	AUTO or MONO 98.0MHz	L3 (X05-)	0V	(a)
2	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, ±40kHz dev Pilot : ±6kHz dev. 60dBμ(ANT input)	(B) Lch-out : W35 Rch-out : W40	AUTO 98.0MHz	IFT (W02-)	Minimum distortion.	

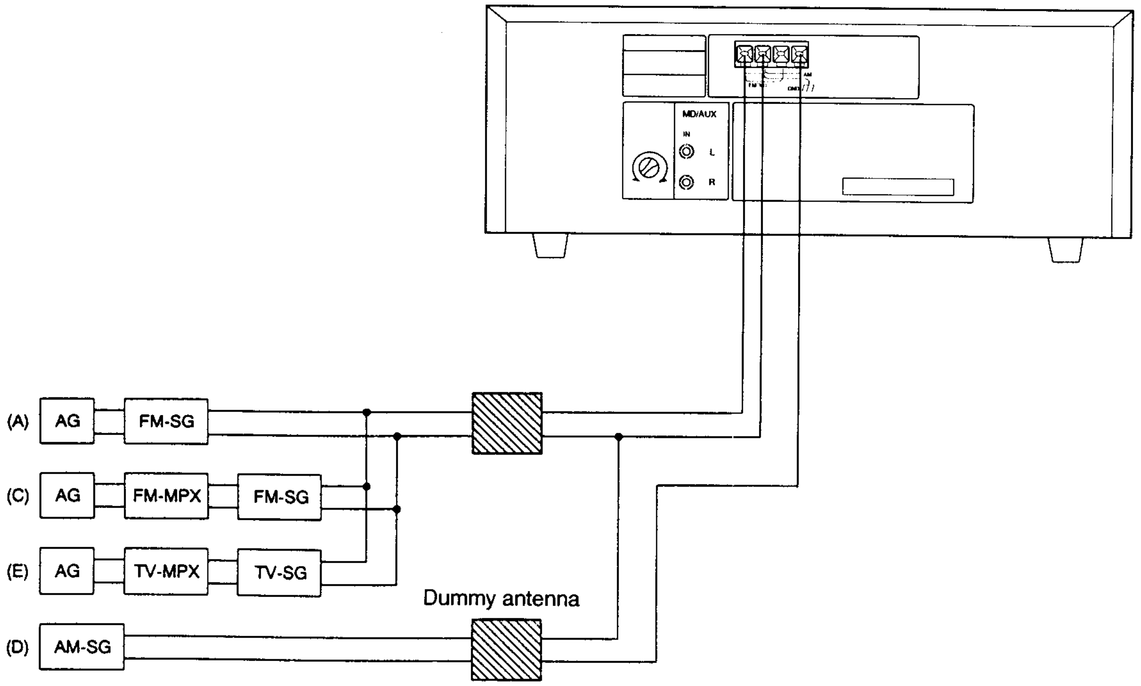
X05-446XX-XX(ENGLISH) (Other countries)

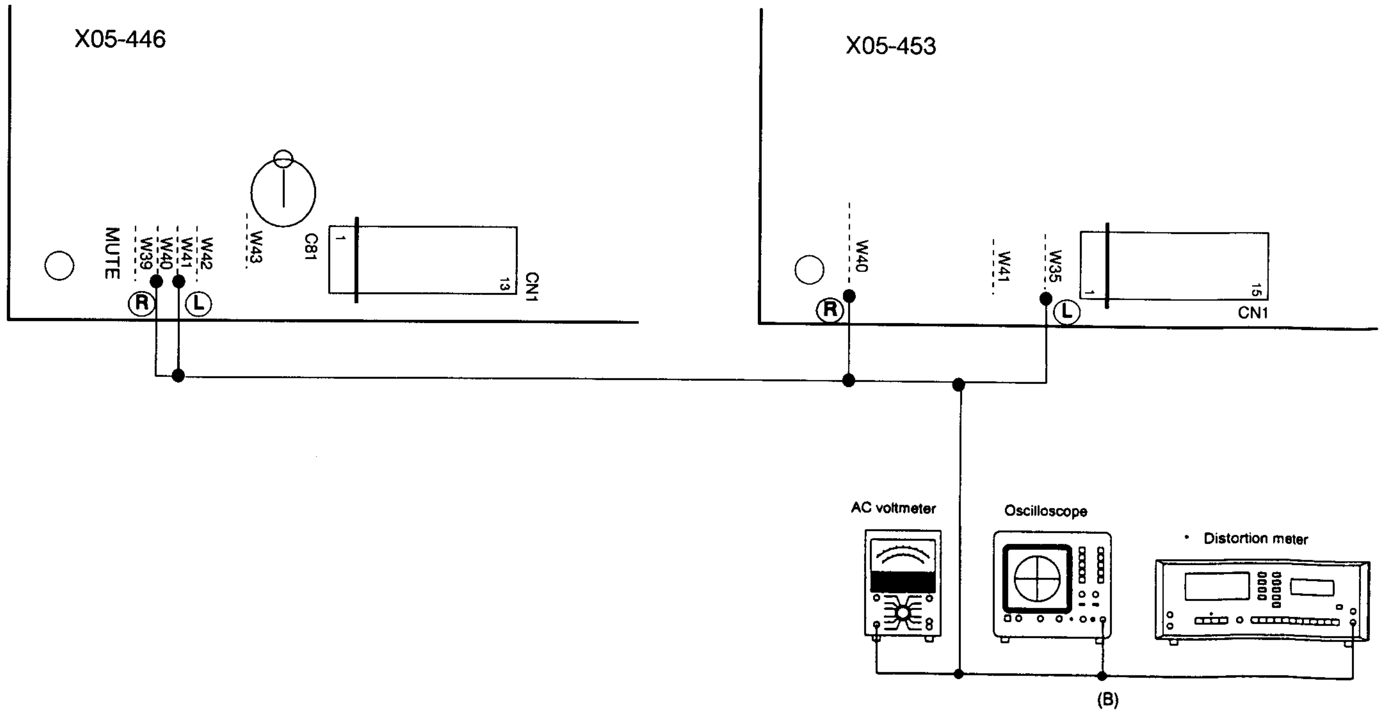
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTNIG	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION Unless otherwise specified, the individual switches should be set as following : BAND : FM							
1	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, ±67.5kHz dev Selector : L or R 60dBμ(ANT input)	(B) Lch-out : W41 Rch-out : W40	AUTO 98.0MHz	IFT (W02-)	Minimum distortion.	

X05-446XX-XX(ESPANÕL)

N.º	ÍTEM	AJUSTES DE ENTRADA	AJUSTES DE SALIDA	AJUSTES DEL SINTONIZADOR	PUNTOS DE ALINEACIÕN	ALINEACIÕN PARA	FIG.
SECCIÕN DE FM A menos que se especifique otra cosa, los controles individuales debrerán ajustarse de la forma siguiente : BAND : FM							
1	DISTORTIÓN (ESTÉREO)	(C) 98,0MHz 1kHz, ±67,5kHz des Selector : L o R 60dBμ(entrada de ANT)	(B) Salida de L : W41 Salida de R : W40	AUTO 98,0MHz	IFT (W02-)	Distorsión mínima.	

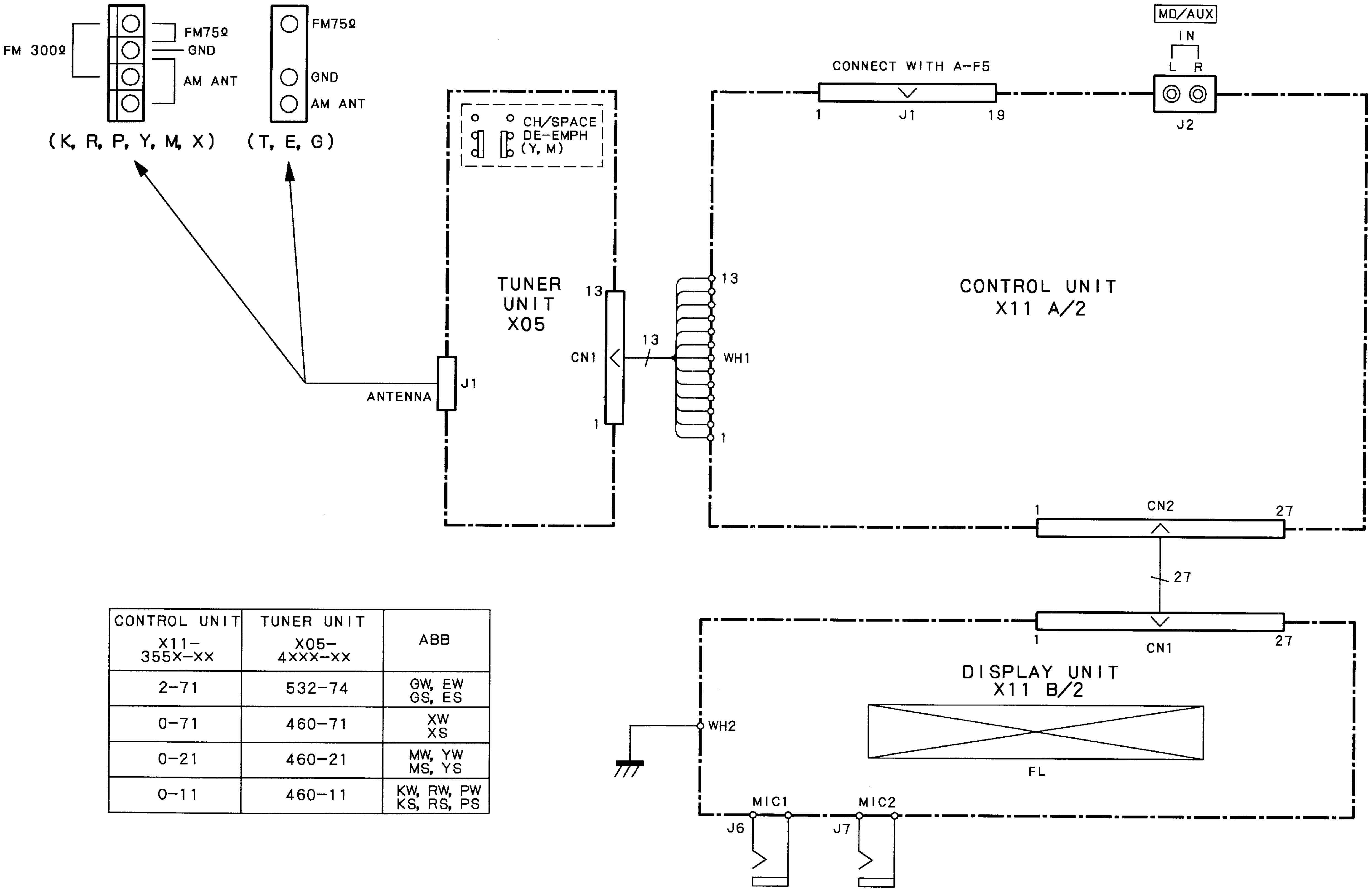
ADJUSTMENT


MD/AUX
IN
L
R
(A)
AG
FM-SG
(C)
AG
FM-MPX
FM-SG
(E)
AG
TV-MPX
TV-SG
Dummy antenna
(D)
AM-SG


X05-446
MUTE
W39
W40
W41
W42
W43
C81
1
13
CN1
R
L
X05-453
W40
W41
W35
1
15
CN1
R
L
AC voltmeter
Oscilloscope
Distortion meter
(B)

C-F5 C-F5

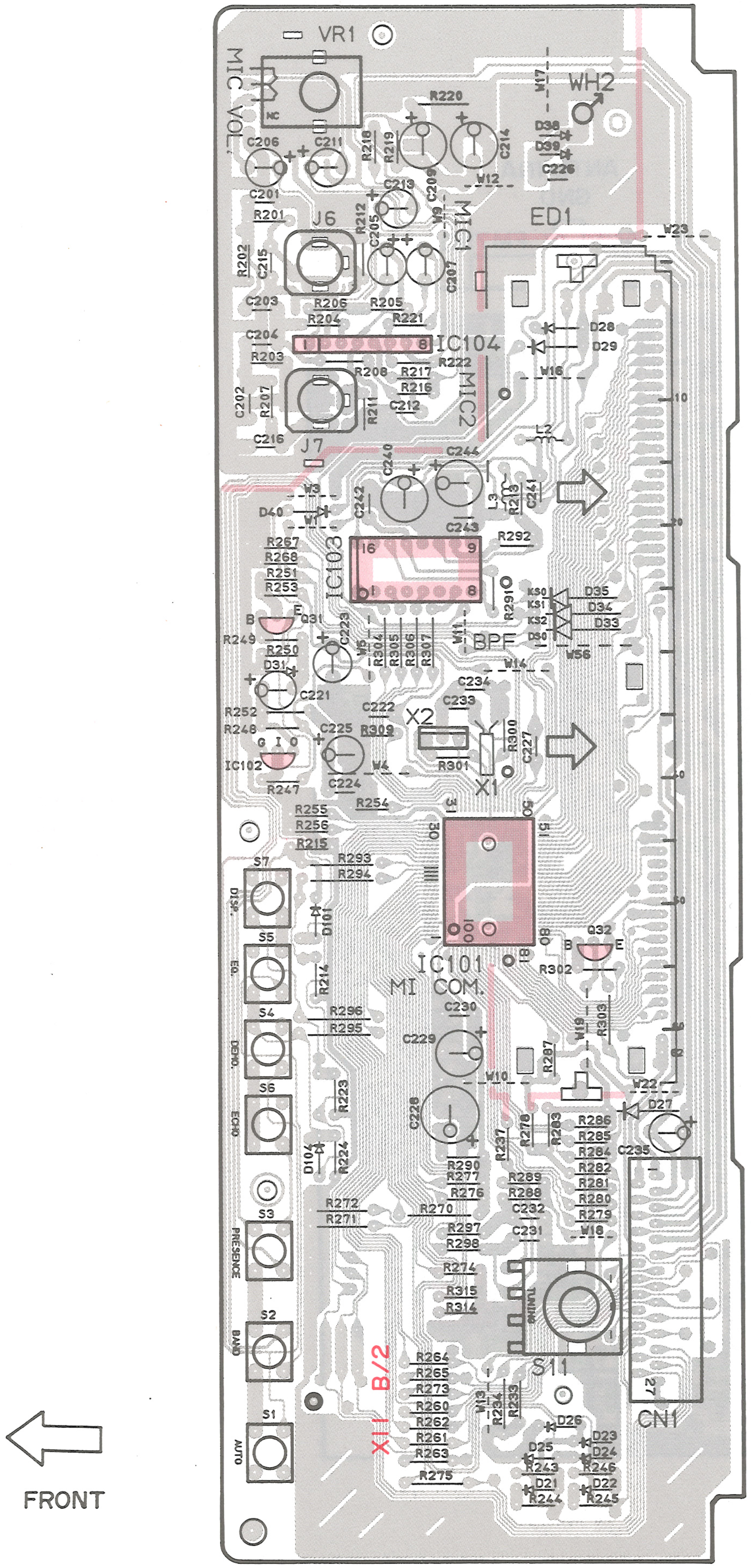
WIRING DIAGRAM

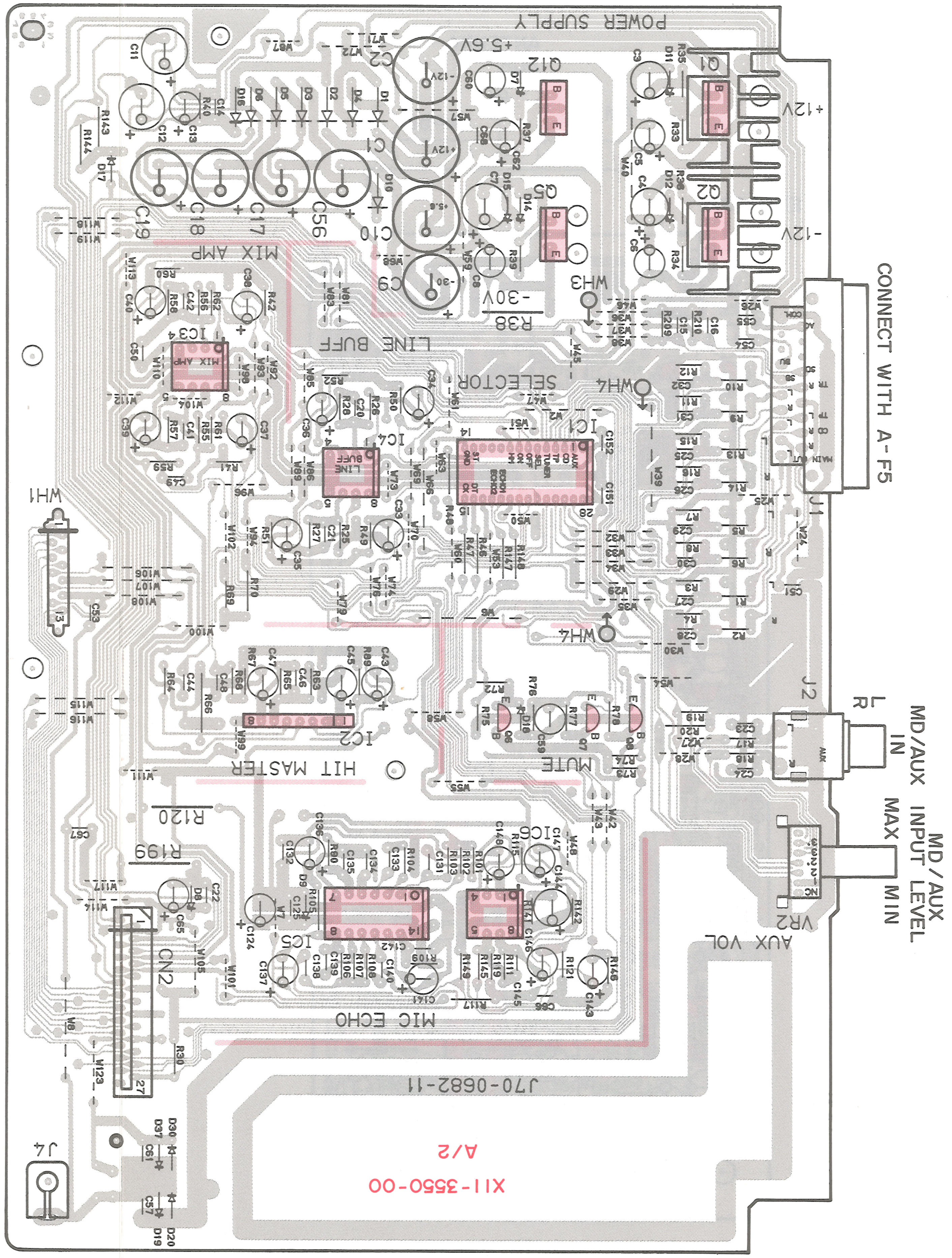

FM 300Ω
FM75Ω
GND
AM ANT
(K, R, P, Y, M, X)
FM75Ω
GND
AM ANT
(T, E, G)
CH/SPACE
DE-EMPH
(Y, M)
TUNER UNIT X05
ANTENNA
J1
13
CN1
1
13
WH1
13
1
CONNECT WITH A-F5
1
J1
19
MD/AUX
IN
L
R
J2
CONTROL UNIT X11 A/2
1
CN2
27
27
1
CN1
27
DISPLAY UNIT X11 B/2
WH2
FL
MIC1
MIC2
J6
J7

CONTROL UNIT X11-355X-XX	TUNER UNIT X05-4XXX-XX	ABB
2-71	532-74	GW, EW GS, ES
0-71	460-71	XW XS
0-21	460-21	MW, YW MS, YS
0-11	460-11	KW, RW, PW KS, RS, PS

PC BOARD (Component side view)

CONTROL UNIT (X11-3552-71 : E,G ; 0-71 : X ; 0-21 : Y,M ; 0-11 : K,R,P)

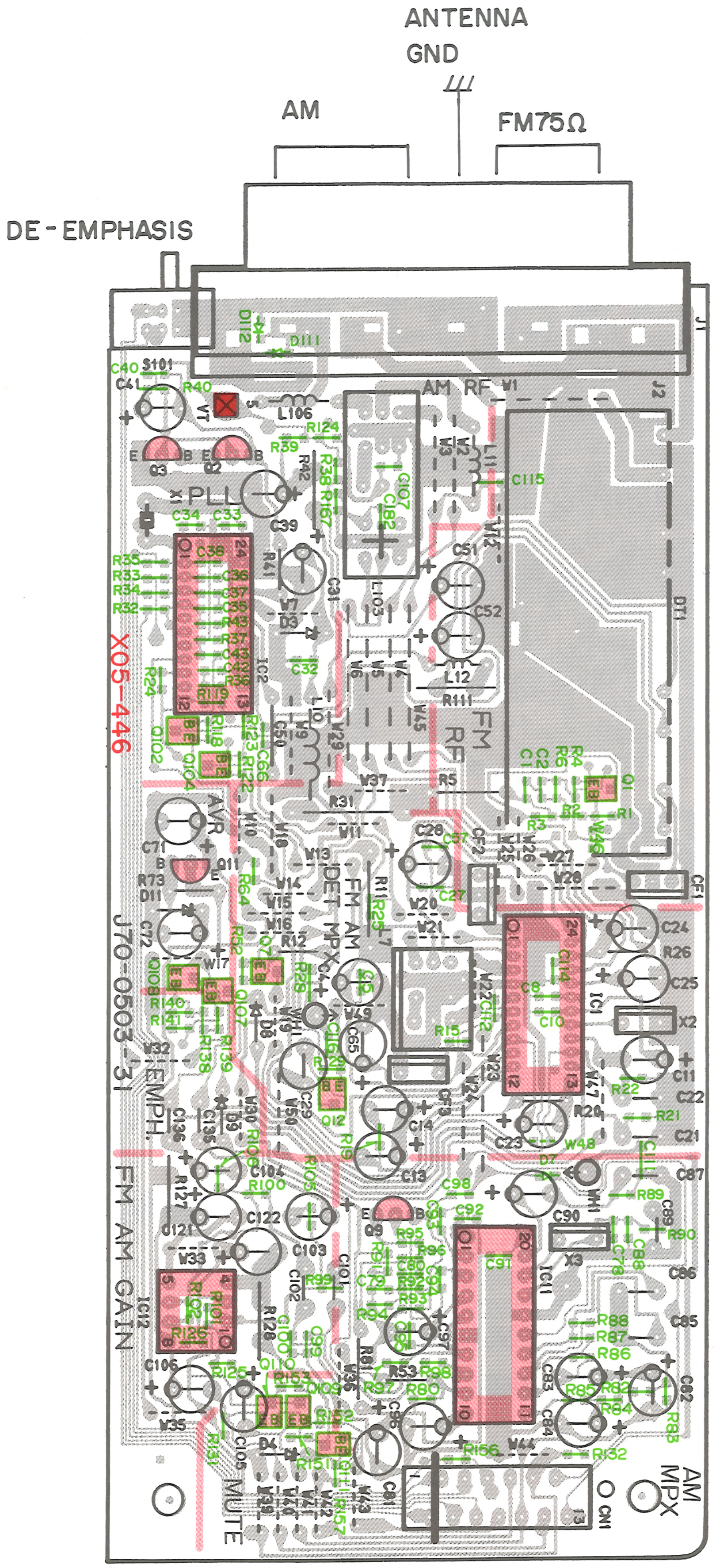

VR1
MIC VOL
WH2
ED1
J6
J7
IC104
MIC1
MIC2
IC103
BPF
X2
X1
IC101
MI COM.
IC102
S7
S5
S4
S6
S3
S2
S1
S11
CN1
X11 B/2
FRONT


POWER SUPPLY
+5.6V
+12V
-12V
-30V
Q1
Q2
Q5
Q12
C1
C2
C9
C10
C17
C18
C19
C56
MIX AMP
LINE BUFF
SELECTOR
IC1
IC2
IC3
IC4
IC5
IC6
HIT MASTER
MUTE
MIC ECHO
R120
R199
CN2
WH1
WH3
WH4
J1
J2
J4
VR2
AUX VOL
CONNECT WITH A-F5
MD/AUX IN
L
R
MD/AUX INPUT LEVEL
MAX
MIN
J70-0682-11
X11-3550-00
A/2

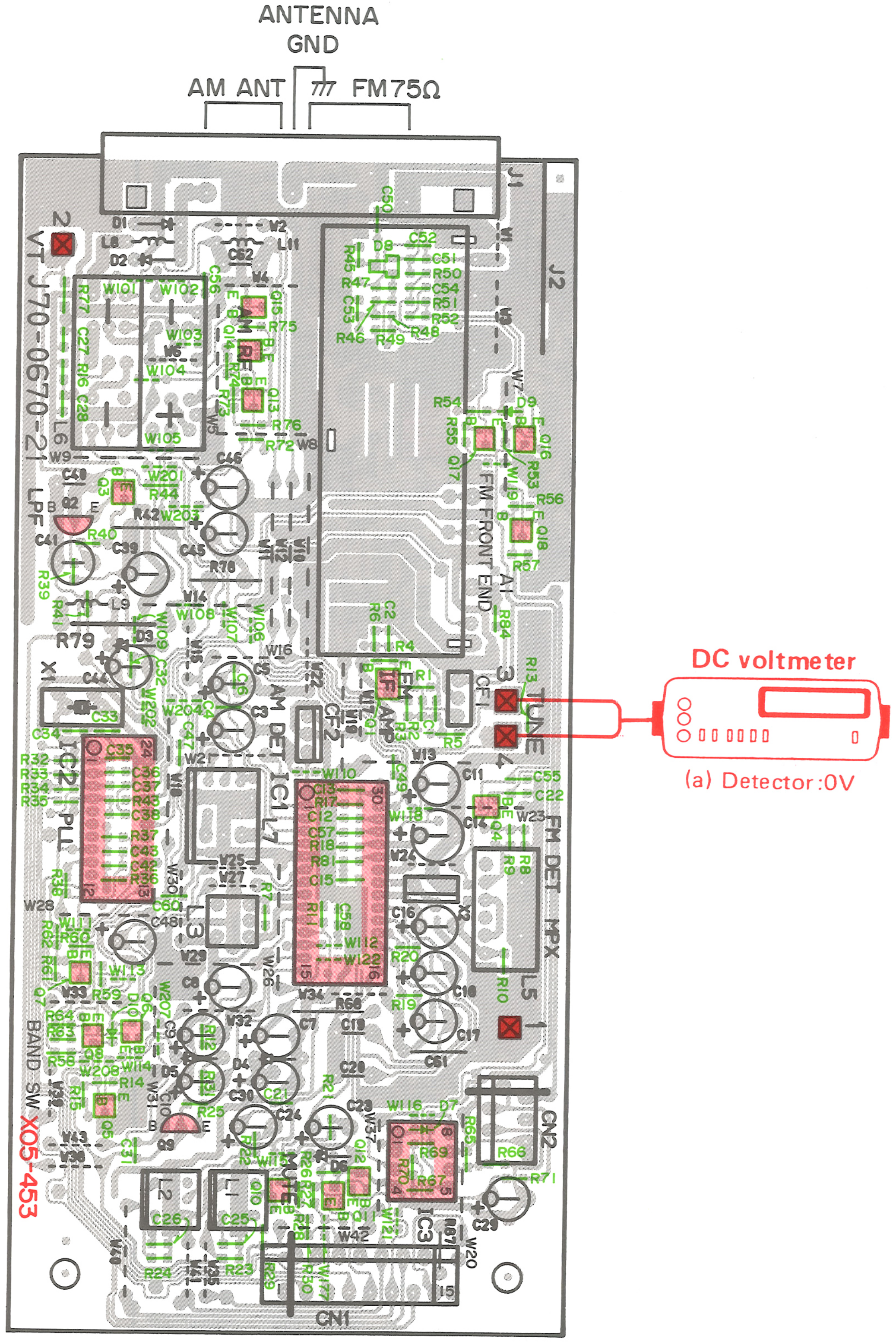
Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Component side view)

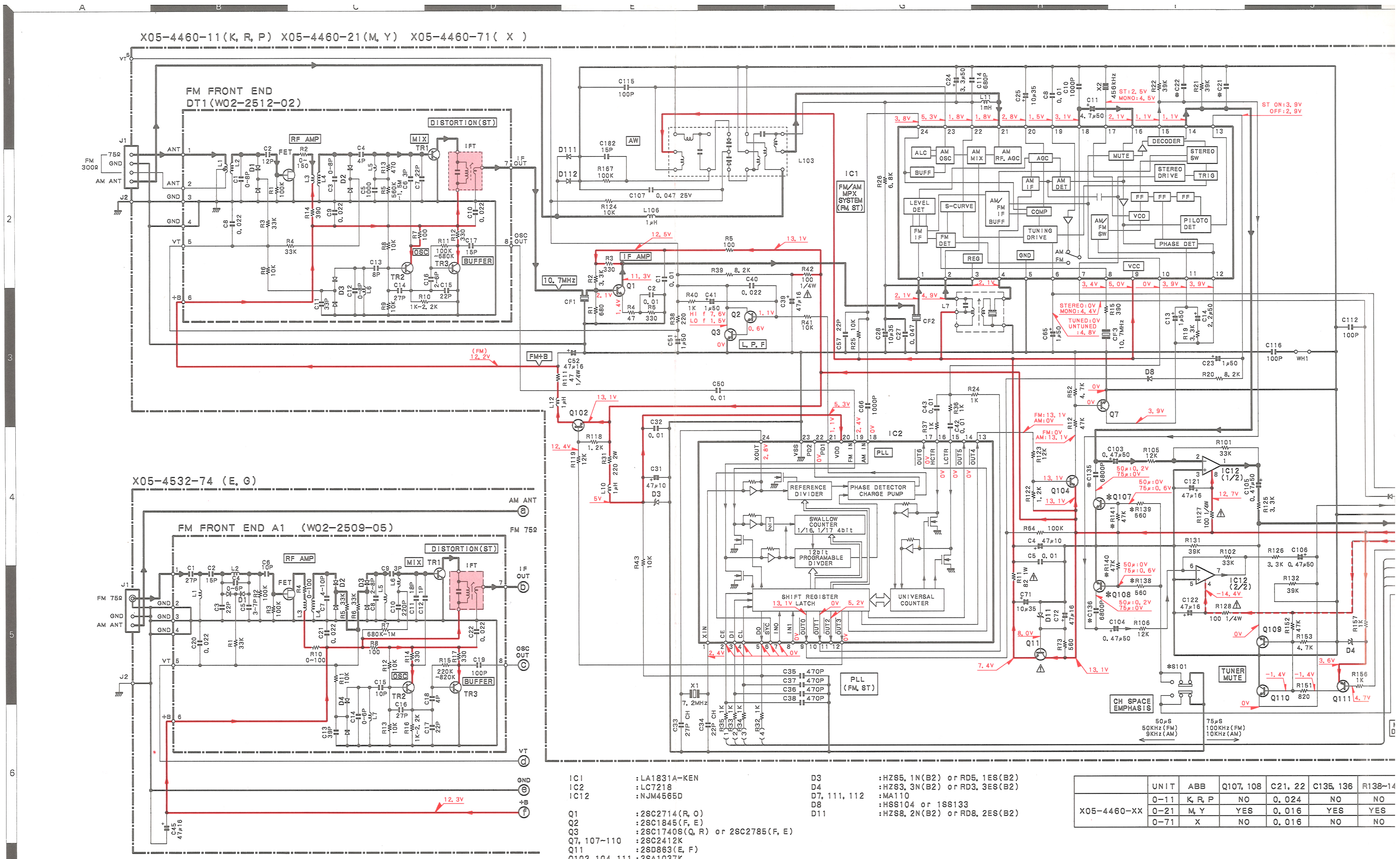
TUNER UNIT (X05-4460-71 :X ; 0-21 : M,Y ;0-11 : K,R,P)


ANTENNA
GND
AM
FM75Ω
DE-EMPHASIS
X05-446
J70-0503-31
PLL
AVR
FM RF
AM RF
FM AM DET
EMPH
FM AM GAIN
MUTE
AM MPX
J1
J2
CN1

TUNER UNIT (X05-4532-74 :G,E)


ANTENNA
GND
AM ANT
FM75Ω
J1
J2
VT J70-0670-21
LPF
X05-453
PLL
FM FRONT END
AM DET
FM DET
MPX
TUNE
BAND SW
MUTE
CN1
CN2
DC voltmeter
(a) Detector :0V

Refer to the schematic diagram for the values of resistors and capacitors.


A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
X05-4460-11(K, R, P) X05-4460-21(M, Y) X05-4460-71(X)
FM FRONT END
DT1(W02-2512-02)
DISTORTION(ST)
RF AMP
MIX
TR1
IFT
FET
OSC
BUFFER
TR2
TR3
IF OUT
OSC OUT
ANT
GND
VT
+B
J1
J2
FM 300Ω
FM 75Ω
AM ANT
10.7MHz
CF1
IF AMP
L.P.F
FM+B
AW
L103
IC1
FM/AM MPX SYSTEM (FM, ST)
ALC
AM OSC
AM MIX
AM RF, AGC
AGC
BUFF
DECODER
STEREO SW
STEREO DRIVE
TRIG
MUTE
LEVEL DET
S-CURVE
AM/FM IF BUFF
AM IF
AM DET
COMP
TUNING DRIVE
FM IF
FM DET
REG
GND
VCO
PILOTO DET
PHASE DET
VCC
FF
AM/FM SW
ST:2.5V MONO:4.5V
ST ON:3.9V OFF:2.9V
STEREO:0V MONO:4.4V
TUNED:0V UNTUNED:4.8V
CF2
CF3
L7
IC2
PLL
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16, 1/17 4bit
12bit PROGRAMABLE DIVDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
PLL (FM, ST)
X1 7.2MHz
IC12 (1/2)
IC12 (2/2)
Q1
Q2
Q3
Q7
Q11
Q102
Q104
*Q107
*Q108
Q109
Q110
Q111
D3
D4
D8
D11
D111
D112
*S101
CH SPACE EMPHASIS
TUNER MUTE
50μS 50KHz(FM) 9KHz(AM)
75μS 100KHz(FM) 10KHz(AM)
X05-4532-74 (E, G)
FM FRONT END A1 (W02-2509-05)
AM ANT
FM 75Ω
VT
GND
+B
(FM) 12.2V
12.3V
WH1

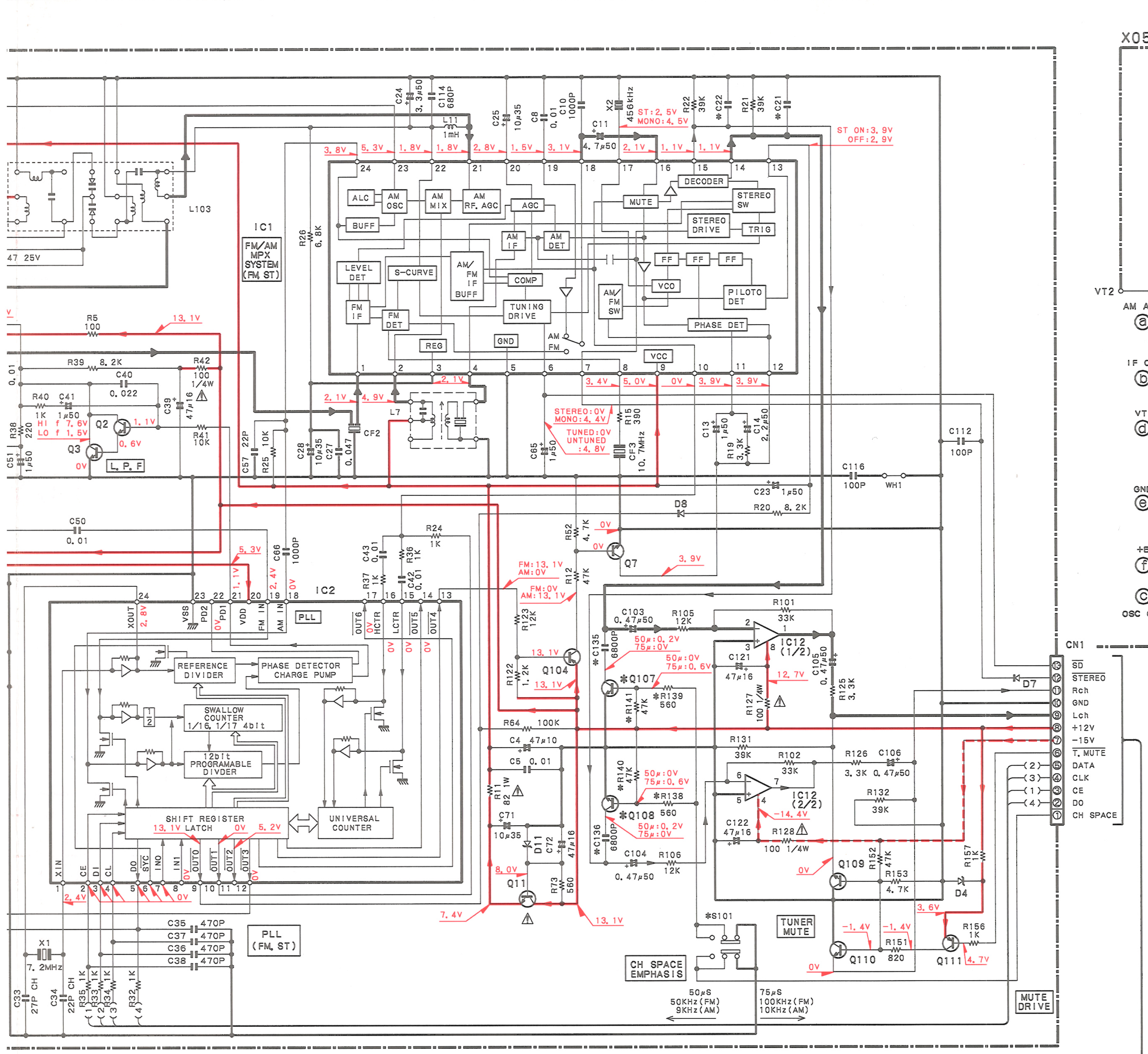
ICI :LA1831A-KEN
IC2 :LC7218
IC12 :NJM4565D

Q1 :2SC2714(R, O)
Q2 :2SC1845(F, E)
Q3 :2SC1740S(Q, R) or 2SC2785(F, E)
Q7, 107~110 :2SC2412K
Q11 :2SD863(E, F)
Q102, 104, 111 :2SA1037K

D3 :HZS5.1N(B2) or RD5.1ES(B2)
D4 :HZS3.3N(B2) or RD3.3ES(B2)
D7, 111, 112 :MA110
D8 :HSS104 or 1SS133
D11 :HZS8.2N(B2) or RD8.2ES(B2)

	UNIT	ABB	Q107, 108	C21, 22	C135, 136	R138~14
X05-4460-XX	0-11	K, R, P	NO	0.024	NO	NO
	0-21	M, Y	YES	0.016	YES	YES
	0-71	X	NO	0.016	NO	NO

CATION : For continued safety, replace
nents only with manufacturer's recommen
list). ⚠ indicates safety crytical comp
risk of electric shock, leakage-current o
ments shall be carried out (exposed par
lated from the supply circuit) before the
the customer.



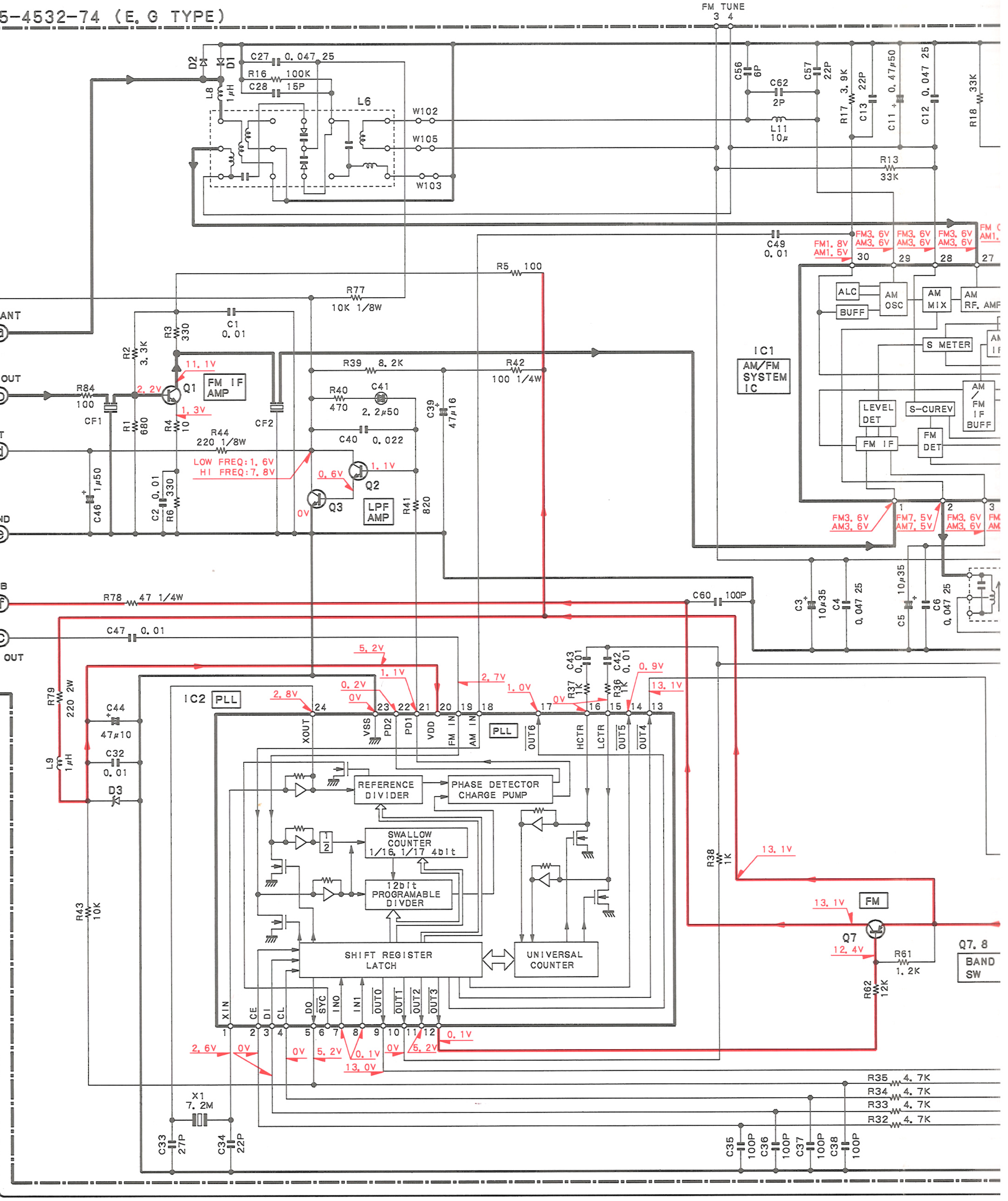
1A-KEN
8
65D

14(R, O)
45(F, E)
40S(Q, R) or 2SC2785(F, E)
12K
3(E, F)
37K

D3 :HZS5, 1N(B2) or RD5, 1ES(B2)
D4 :HZS3, 3N(B2) or RD3, 3ES(B2)
D7, 111, 112 :MA110
D8 :HSS104 or 1SS133
D11 :HZS8, 2N(B2) or RD8, 2ES(B2)

	UNIT	ABB	Q107, 108	C21, 22	C135, 136	R138~141	S101
X05-4460-XX	0-11	K, R, P	NO	0, 024	NO	NO	NO
	0-21	M, Y	YES	0, 016	YES	YES	YES
	0-71	X	NO	0, 016	NO	NO	NO

X05-4532-74 (E, G TYPE)



IC1 :LA1836
IC2 :LC7218

Q1 :2SC2714(R, O)
Q2 :2SC1845(F, E)
Q3, 4, 5 :2SC4081(R, S)
Q7, 8, 10 :2SA1576(R, S)
Q9 :2SD863(E, F)
Q11, 12 :2SD1757K

D1, 2, 5 :1SS133 or HSS104
D3 :MTZJ5, 1(B) or RD5, 1ES(B2)
D4 :MTZJ8, 2(B) or RD8, 2ES(B2)
D6 :MTZJ3, 3(B) or RD3, 3ES(B2)

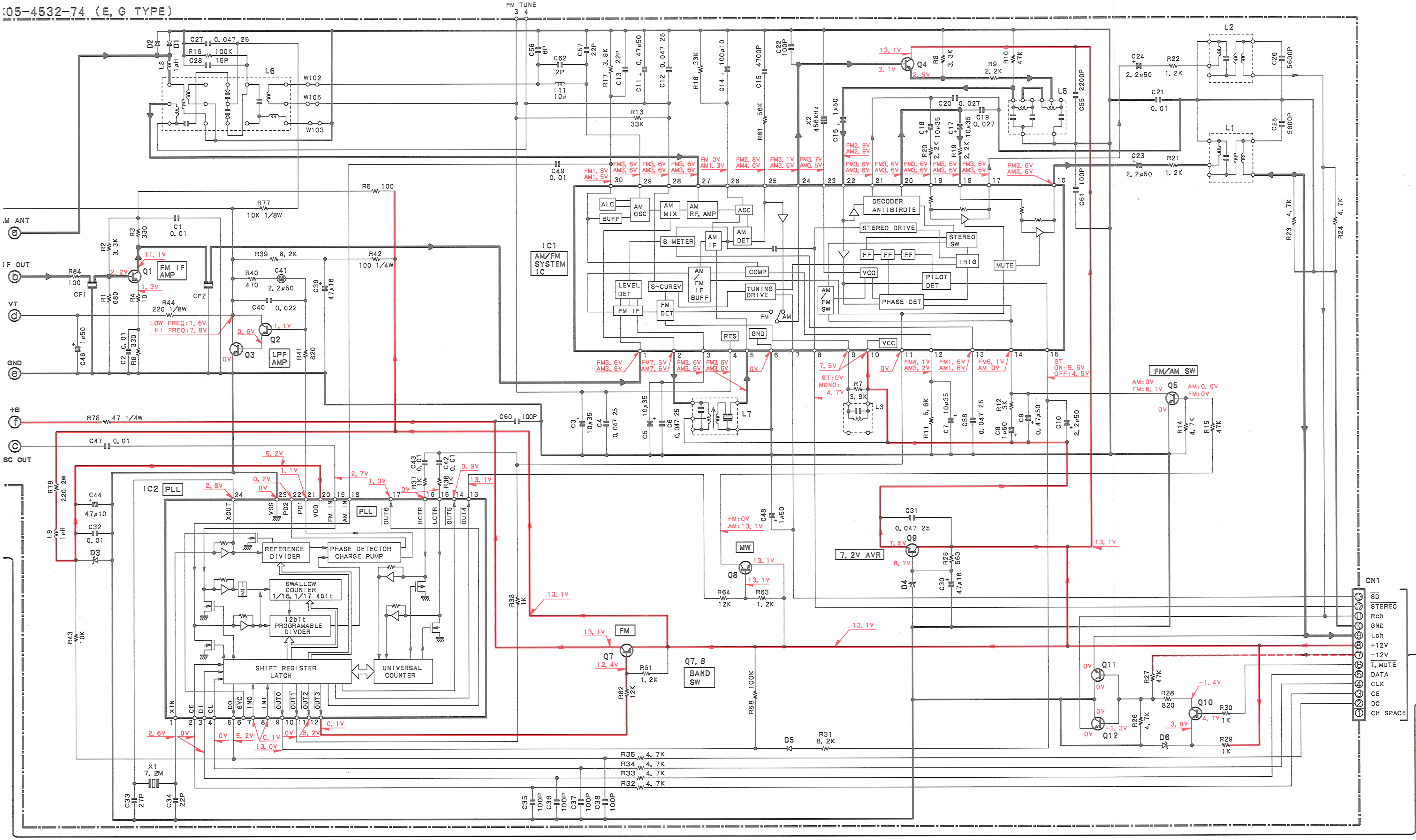
CATION : For continued safety, replace safety crytical components only with manufacturer's recommended parts (refer to pars list). ⚠ indicates safety crytical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a singal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

Die angege
hochohmig
Signals (mi
schluß) gen
von Unters
Geräten u.
nungswerte
Feldstärke v

05-4532-74 (E, G TYPE)


FM TUNE
ANT
IF OUT
VT
GND
+B
SC OUT
IC1 AM/FM SYSTEM IC
IC2 PLL
ALC
BUFF
AM OSC
AM MIX
AM RF. AMP
AGC
S METER
AM IF
AM DET
DECODER ANTIBIRDIE
STEREO DRIVE
STEREO SW
FF
TRIG
MUTE
VCO
PILOT DET
PHASE DET
COMP
TUNING DRIVE
LEVEL DET
S-CUREV
AM / FM IF BUFF
FM IF
FM DET
REG
GND
VCC
FM AMP
FM IF AMP
LPF AMP
LOW FREQ:1.6V
HI FREQ:7.8V
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16, 1/17 4bit
12bit PROGRAMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
FM/AM SW
7.2V AVR
MW
FM
Q7, 8 BAND SW
ST:0V
MONO:4.7V
ST ON:5.6V OFF:4.5V
AM:0V FM:6.1V
AM:0.6V FM:0V
FM:0V AM:13.1V
CN1
SD
STEREO
Rch
GND
Lch
+12V
-12V
T. MUTE
DATA
CLK
CE
DO
CH SPACE
TO X11-WH1

IC1	:LA1836	Q1	:2SC2714(R, O)	D1, 2, 5	:1SS133 or HSS104
IC2	:LC7218	Q2	:2SC1845(F, E)	D3	:MTZJ5. 1(B) or RD5. 1ES(B2)
		Q3, 4, 5	:2SC4081(R, S)	D4	:MTZJ8. 2(B) or RD8. 2ES(B2)
		Q7, 8, 10	:2SA1576(R, S)	D6	:MTZJ3. 3(B) or RD3. 3ES(B2)
		Q9	:2SD863(E, F)		
		Q11, 12	:2SD1757K		

SIGNAL LINE
GND LINE
+B LINE
-B LINE

npo-
pars
the
sure-
nsu-
ed to

DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a singal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

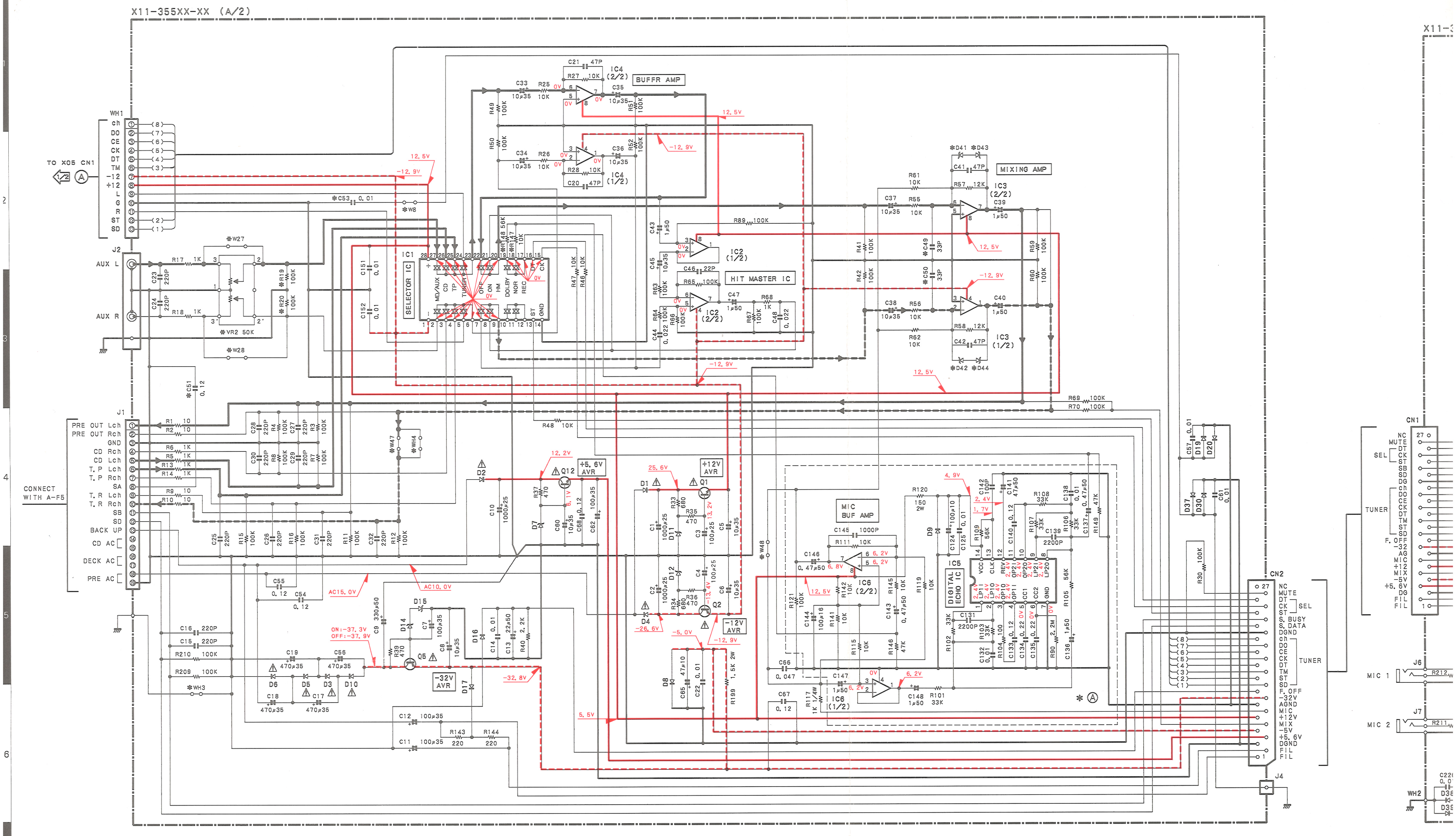
Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen. "DOLBY", the double-D symbol and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

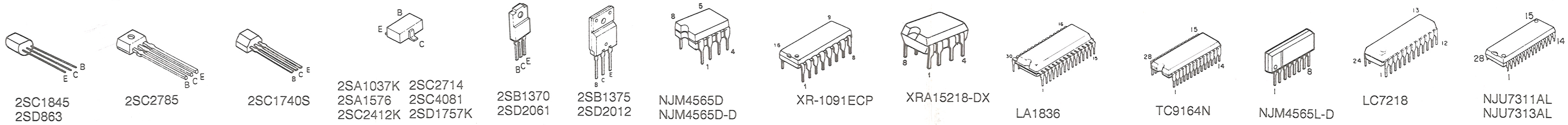
1/2

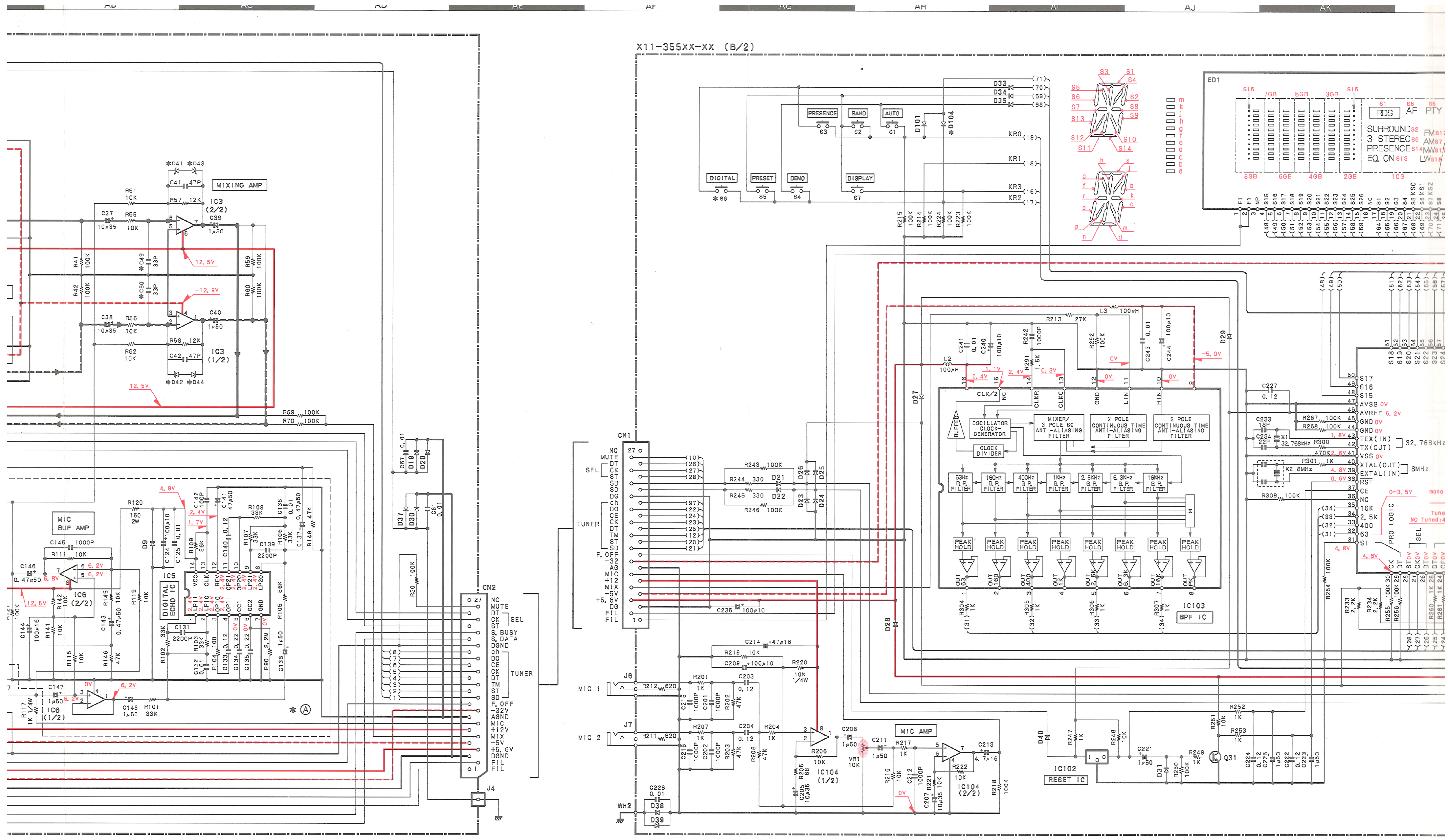
C-F5

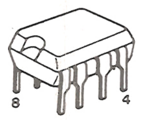
KENWOOD

Y08-5220-11

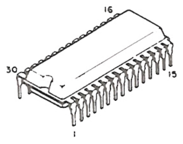

X11-355XX-XX (A/2)
TO X05 CN1
WH1
ch
DO
CE
CK
DT
TM
-12
+12
L
G
R
ST
SD
J2
AUX L
AUX R
VR2 50K
W27
W28
J1
PRE OUT Lch
PRE OUT Rch
GND
CD Rch
CD Lch
T. P Lch
T. P Rch
SA
T. R Lch
T. R Rch
SB
SD
BACK UP
CD AC
DECK AC
PRE AC
CONNECT WITH A-F5
IC1
SELECTOR IC
MD/AUX
CD
TP
TUNER
OFF
ON
HM
DOLBY
NOR
REC
ST
GND
CK
IC4 (2/2)
BUFFER AMP
IC4 (1/2)
IC2 (1/2)
IC2 (2/2)
HIT MASTER IC
IC3 (2/2)
IC3 (1/2)
MIXING AMP
12, 5V
-12, 9V
+5, 6V AVR
+12V AVR
-12V AVR
-32V AVR
Q12
Q1
Q2
Q5
25, 6V
12, 2V
13, 2V
13, 4V
-26, 6V
-5, 0V
-32, 8V
5, 5V
AC15, 0V
AC10, 0V
ON:-37, 3V
OFF:-37, 9V
MIC BUF AMP
IC6 (2/2)
IC6 (1/2)
IC5
DIGITAL ECHO IC
4, 9V
2, 4V
1, 7V
6, 8V
6, 6V
6, 2V
CN1
CN2
NC
MUTE
SEL
DT
CK
ST
SB
SD
DG
S, BUSY
S, DATA
DGND
ch
DO
CE
TUNER
F, OFF
-32V
AGND
MIC
+12V
MIX
-5V
+5, 6V
FIL
J4
J6
J7
MIC 1
MIC 2
WH2
X11-3


2SC1845
2SD863
2SC2785
2SC1740S
2SA1037K
2SA1576
2SC2412K
2SC2714
2SC4081
2SD1757K
2SB1370
2SD2061
2SB1375
2SD2012
NJM4565D
NJM4565D-D
XR-1091ECP
XRA15218-DX
LA1836
TC9164N
NJM4565L-D
LC7218
NJU7311AL
NJU7313AL

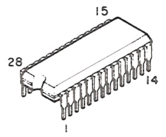

AB
AC
AD
AE
AF
AG
AH
AI
AJ
AK
X11-355XX-XX (B/2)
MIXING AMP
IC3 (2/2)
IC3 (1/2)
MIC BUF AMP
IC6 (2/2)
IC6 (1/2)
IC5
DIGITAL ECHO IC
CN1
CN2
J4
J6
J7
WH2
MIC 1
MIC 2
TUNER
SEL
MIC AMP
IC104 (1/2)
IC104 (2/2)
IC102
RESET IC
IC103
BPF IC
Q31
ED1
PRESENCE
BAND
AUTO
DIGITAL
PRESET
DEMO
DISPLAY
RDS
AF
PTY
SURROUND
3 STEREO
PRESENCE
EQ ON
OSCILLATOR CLOCK-GENERATOR
CLOCK DIVIDER
BUFFER
MIXER/ 3 POLE SC ANTI-ALIASING FILTER
2 POLE CONTINUOUS TIME ANTI-ALIASING FILTER
63Hz B.P. FILTER
160Hz B.P. FILTER
400Hz B.P. FILTER
1KHz B.P. FILTER
2.5KHz B.P. FILTER
6.3KHz B.P. FILTER
16KHz B.P. FILTER
PEAK HOLD
32.768kHz
8MHz
PRO LOGIC
12.5V
-12.9V
6.8V
6.2V
4.9V
2.4V
1.7V
5.4V
1.1V
0.3V
-5.0V
4.8V
0V



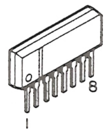
XRA15218-DX



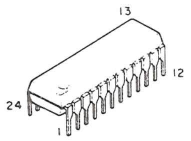
LA1836



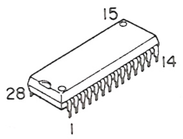
TC9164N



NJM4565L-D



LC7218



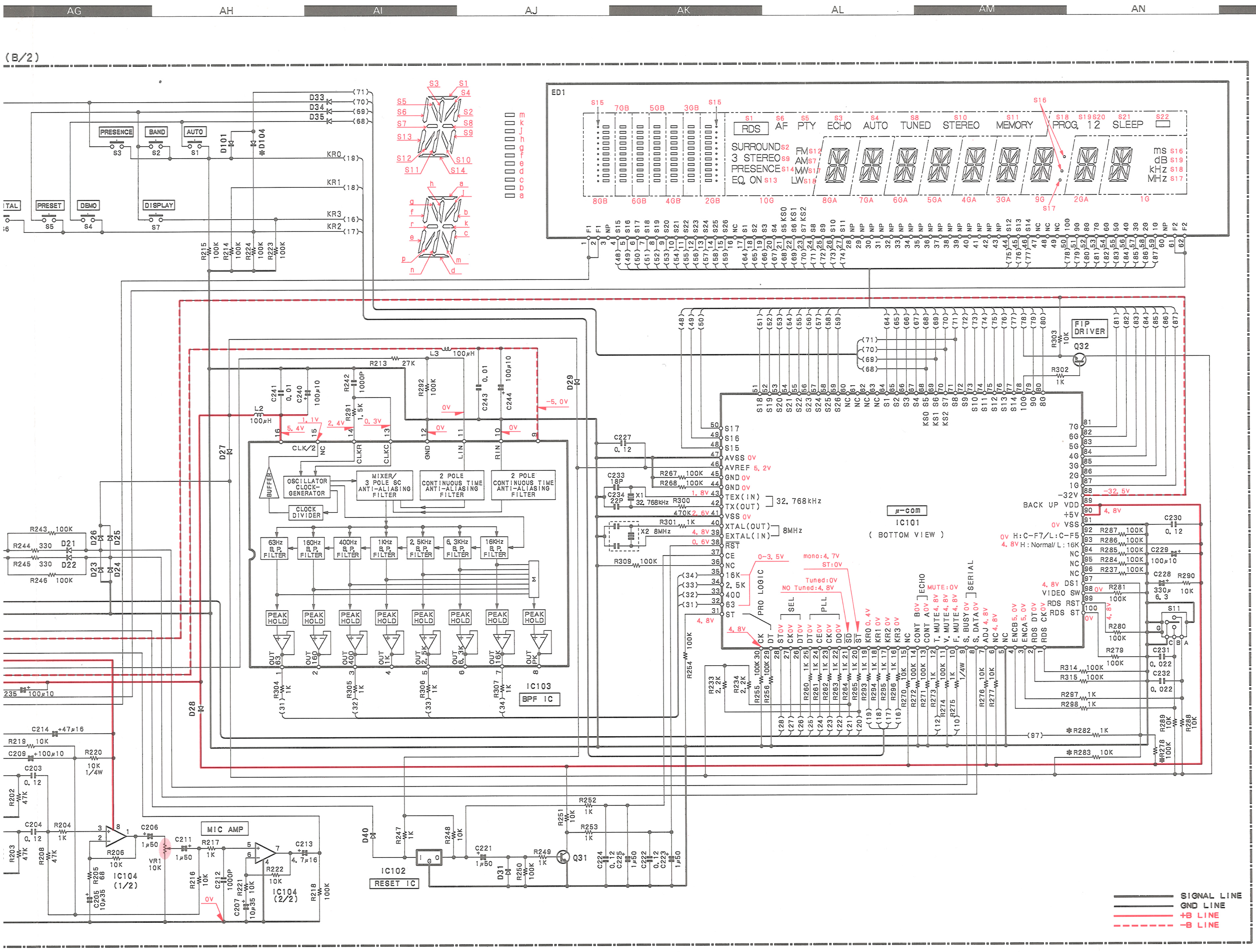
NJU7311AL
NJU7313AL

P

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

DC voltages are as measured with a high
ter during reception of the FM broadcast
strength of 60 dB at the ANT termina
slightly due to variations between in
or/and units. Values in parentheses are as
ception of the AM broadcast signal (with
60 dB at the ANT terminal).


AG
AH
AI
AJ
AK
AL
AM
AN
AO
AP
(B/2)
ED1
RDS AF PTY ECHO AUTO TUNED STEREO MEMORY PROG. 12 SLEEP
SURROUND 3 STEREO PRESENCE EQ. ON
FM AM MW LW
ms dB KHz MHz
PRESENCE
BAND
AUTO
PRESET
DEMO
DISPLAY
FIP DRIVER
Q32
μ-com
IC101
(BOTTOM VIEW)
32.768kHz
8MHz
IC103
BPF IC
OSCILLATOR CLOCK-GENERATOR
CLOCK DIVIDER
BUFFER
MIXER/ 3 POLE SC ANTI-ALIASING FILTER
2 POLE CONTINUOUS TIME ANTI-ALIASING FILTER
63Hz B.P. FILTER
160Hz B.P. FILTER
400Hz B.P. FILTER
1KHz B.P. FILTER
2.5KHz B.P. FILTER
6.3KHz B.P. FILTER
16KHz B.P. FILTER
PEAK HOLD
MIC AMP
IC104 (1/2)
IC104 (2/2)
IC102
RESET IC
Q31
SIGNAL LINE
GND LINE
+B LINE
−B LINE

IC1 :NJμ7313AL or TC9164N
IC2, 104 :NJM4565L-D
IC3, 4, 6 :XRA15218-DX or NJM4565D-D
IC5 :M65844P
IC101 :CXP82440A-116Q
IC102 :PST9140-T
IC103 :XR-1091ECP

Q1, 12 :2SD2061 or 2SB2012
Q2, 5 :2SB1370 or 2SB1375
Q31, 32 :2SC1740S(Q, R) or 2SC2785(F, E)

D1~6, 10 :S5688B or 1SR139-100
D7 :RD6, 2ES(B2) or HZS6, 2N(B2)
D8, 9 :RD5, 1ES(B2) or HZS5, 1N(B2)
D11, 12 :RD13ES(B2) or HZS13N(B2)
D14, 15, 17 :RD16ES(B2) or HZS16N(B2)
D16, 19~31 33~35, 37~40 101, 104 :1SS131 or HSS104A
D41~44 :RD3, 9ES(B2) or HZS3, 9N(B2)

ED1 :FIP10EMW6R

	DESTINATION			
	0-11	0-21	0-71	2-71
	K, R, P	Y, M	X	E, G
Ⓐ	NO	YES	NO	NO
D41~44	NO	NO	NO	YES
D104	YES	NO	NO	NO
R19, 20	YES	NO	NO	NO
R147, 148	NO	YES	NO	NO
R278	NO	NO	YES	YES
R282	NO	YES	NO	NO
R283	YES	YES	NO	NO
VR2	NO	YES	YES	YES
S6	NO	YES	NO	NO
C49, 50, 53	NO	NO	NO	YES
C51	NO	NO	NO	YES
W8	NO	NO	NO	YES
W27, 28	YES	NO	NO	NO
W47	YES	YES	YES	NO
W48	YES	NO	YES	YES
WH3, 4	NO	NO	NO	YES

CATION : For continued safety, replace safety crytical components only with manufacturer's recommended parts (refer to pars list). ⚠ indicates safety crytical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

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Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a singal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

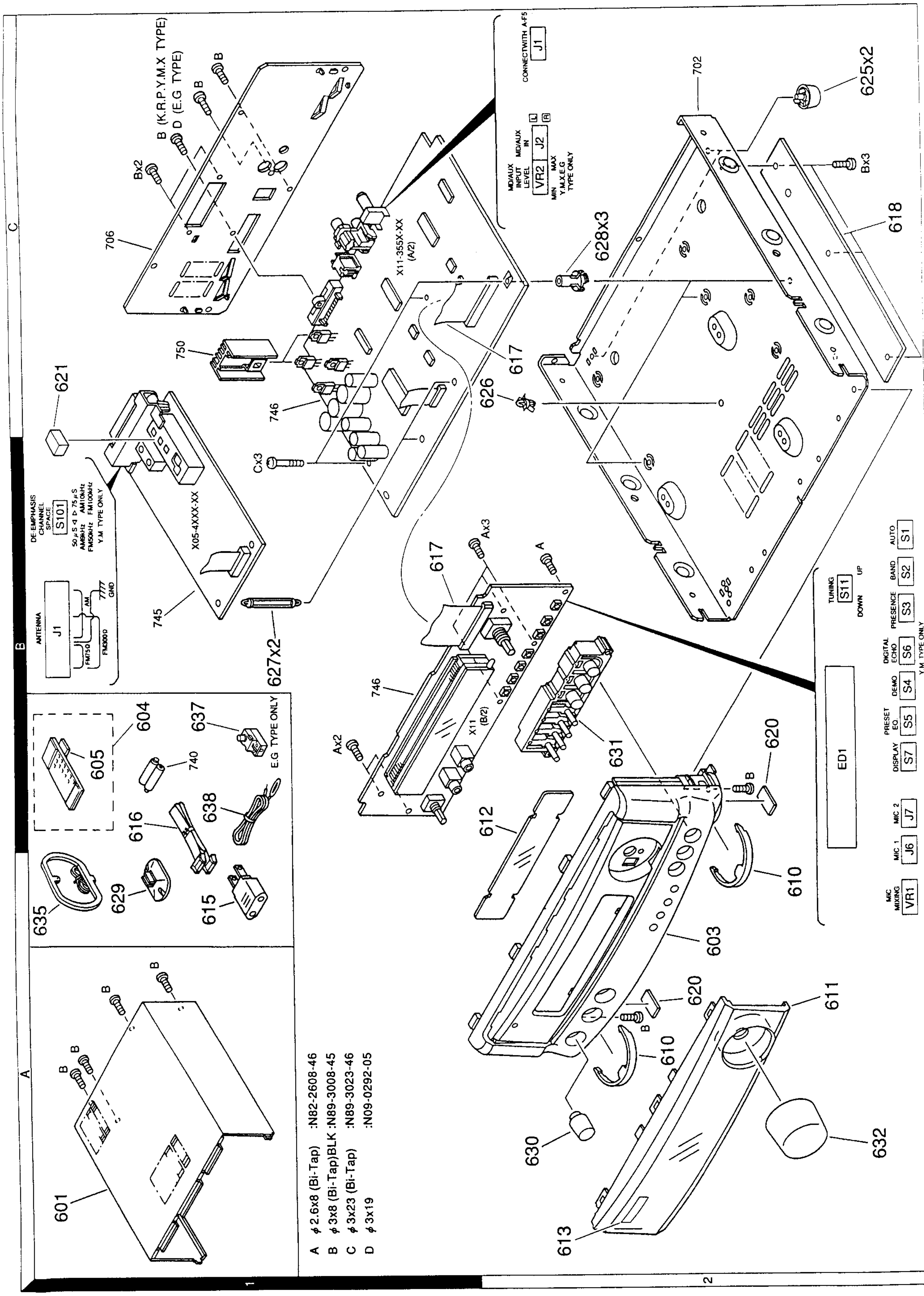
2/2

C-F5

KENWOOD

Y08-5220-11

EXPLODED VIEW


706
Bx2
B (K.R.P.Y.M.X. TYPE)
D (E.G TYPE)
B
B
CONNECT WITH A-F5
J1
MD/AUX INPUT LEVEL
VR2
MIN MAX
Y.M.X.E.G TYPE ONLY
MD/AUX IN
J2
L
R
X11-355X-XX (A/2)
702
625x2
Bx3
618
628x3
617
626
750
746
Cx3
621
DE-EMPHASIS CHANNEL SPACE
S101
50μS ◁ ▷ 75μS
AM9kHz AM10kHz
FM50kHz FM100kHz
Y.M TYPE ONLY
ANTENNA
J1
AM
FM75Ω
FM300Ω
GND
X05-4XXX-XX
745
627x2
617
Ax3
A
746
X11 (B/2)
Ax2
631
620
B
612
610
603
ED1
TUNING
S11
DOWN
UP
AUTO
S1
BAND
S2
PRESENCE
S3
DIGITAL ECHO
S6
Y.M TYPE ONLY
DEMO
S4
PRESET EQ.
S5
DISPLAY
S7
MIC 2
J7
MIC 1
J6
MIC MIXING
VR1
604
605
637
E.G TYPE ONLY
740
638
616
635
629
615
B
B
B
B
601
620
B
610
611
630
632
613
A
B
C
1
2

A ϕ2.6x8 (Bi-Tap) :N82-2608-46
B ϕ3x8 (Bi-Tap)BLK :N89-3008-45
C ϕ3x23 (Bi-Tap) :N89-3023-46
D ϕ3x19 :N09-0292-05

Parts with the exploded numbers larger than 700 are not supplied.

C-F5

PARTS LIST

× New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

NO.1

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
				C-F5		
601	1A	*	A01-3219-01	METALLIC CABINET		
603	2A	*	A60-0711-21	PANEL	YM	
603	2A	*	A60-0712-21	PANEL	KRPXEG	
604	1B	*	A70-1015-05	REMOTE CONTROLLER ASSY		
605	1B		A09-0106-08	BATTERY COVER		
610	2A	*	B07-2268-14	ESCUTCHEON		
611	2A	*	B10-2095-12	FRONT GLASS		
612	2B	*	B11-0288-04	COLOR FILTER		
613	2A	*	B43-0301-04	KENWOOD BADGE		
-		*	B46-0096-53	WARRANTY CARD	X	
-			B46-0121-33	WARRANTY CARD	P	
-		*	B46-0307-23	WARRANTY CARD	KY	
-			B46-0310-03	WARRANTY CARD	EG	
-		*	B58-0964-13	CAUTION CARD (CAUTION UL)	KRY	
-		*	B58-0965-13	CAUTION CARD (TX TYPE PL)	X	
-		*	B58-0966-13	CAUTION CARD (ELM TYPE PL)	ME	
-		*	B58-0967-03	CAUTION CARD (P TYPE PL)	P	
-		*	B58-0970-13	CAUTION CARD (RG TYPE PL)	RG	
-		*	B59-1104-00	SERVICE DIRECTORY	Y	
-		*	B60-2051-00	INST.MANUAL UD-613/663(EN)	YMX	
-		*	B60-2052-00	INST.MANUAL UD-503/553(FR)	E	
-		*	B60-2053-00	INST.MANUAL UD-503/553(G)	EG	
-		*	B60-2054-00	INST.MANUAL UD-503/553(D)	E	
-		*	B60-2055-00	INST.MANUAL UD-503/553(IT)	E	
-		*	B60-2056-00	INST.MANUAL UD-503/553(SP)	E	
-		*	B60-2057-00	INST.MANUAL UD-613/663(C)	M	
-		*	B60-2058-00	INST.MANUAL UD-613/663(TAIWAN)	M	
-		*	B60-2059-00	INST.MANUAL UD-503/553(EN)	KP	
-		*	B60-2060-00	INST.MANUAL UD-503/553(FR)	P	
-		*	B60-2061-00	INST.MANUAL UD-503/553(SP)	R	
-		*	B60-2261-00	INST.MANUAL UD-613/663(SP)	M	
⚠ 615	1A		E03-0115-05	AC PLUG ADAPTER	M	
616	1B	*	E30-2738-05	CORD WITH CONNECTOR		
617	1B,1C	*	E35-1218-05	FLAT CABLE (27P) X11 CN1-CN2		
618	2C	*	F20-1440-03	INSULATING BOARD	YMXEG	
620	2A,2B		G11-2231-14	CUSHION	M	
620	2A,2B	*	G11-2234-04	CUSHION	KRPYX	
620	2A,2B	*	G11-2234-04	CUSHION	EG	
621	1C	*	G11-2240-04	CUSHION		
		*	H50-1450-04	ITEM CARTON CASE	KRPYX	S
		*	H50-1451-04	ITEM CARTON CASE	M	S
		*	H50-1456-04	ITEM CARTON CASE	KRPYX	W
		*	H50-1457-04	ITEM CARTON CASE	M	W
		*	H50-1602-04	ITEM CARTON CASE	EG	S
		*	H50-1603-04	ITEM CARTON CASE	EG	W
-		*	H10-5995-12	POLYSTYRENE FOAMED FIXTURE (L)		S
-		*	H10-5996-12	POLYSTYRENE FOAMED FIXTURE (R)		S
-			H10-5997-12	POLYSTYRENE FOAMED FIXTURE (L)		W
-			H10-5998-12	POLYSTYRENE FOAMED FIXTURE (R)		W
-			H13-0086-04	CARTON BOARD		
-			H25-0632-24	PROTECTION BAG		

L: Scandinavia **K**: USA **P**: Canada **R:** Mexico S : SINGAPORE MADE
Y: PX(Far East, Hawaii) **T**: England **E**: Europe **G**: Germany W : MALAYSIA MADE
Y: AAFES (Europe) **X**: Australia **M**: Other Areas
⚠ indicates safety critical components

× New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

NO.2

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
-			H25-0681-04	PROTECTION BAG		
625	2C		J02-0366-15	FOOT REAR		
626	3C		J19-3324-15	UNIT HOLDER		
627	1B		J19-3632-05	UNIT HOLDER		
628	2C		J19-3752-14	UNIT HOLDER		
629	1A		J19-3645-05	ANTENNA STAND		
630	2A		K29-5839-14	KNOB MIC MIXING		
631	2B		K29-6108-02	KNOB	YM	
631	2B	*	K29-6109-02	KNOB	KRPXEG	
632	2A	*	K29-6111-14	KNOB TUNING		
A	1B,2B		N82-2608-46	BINDING HEAD TAPTITE SCREW		
B	1A,1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
C	1B		N89-3023-46	BINDING HEAD TAPTITE SCREW		
D	1C		N09-0292-05	BRAZIER HD STEPPED SCREW M3X19	EG	
635	1A		T90-0195-05	LOOP ANTENNA		
637	1B		T90-0198-05	ANTENNA ADAPTOR	EG	
638	1B		T90-0801-05	LEAD WIRE ANTENNA		
				TUNER UNIT(X05-4460-XX)		
C1 ,2			CK73FB1H103K	CHIP C 0.010UF K		
C4			CE04LW1A470M	ELECTRO 47UF 10WV		
C5			CK73FB1H103K	CHIP C 0.010UF K		
C8			CK73FB1H103K	CHIP C 0.010UF K		
C10			CK73FB1H102K	CHIP C 1000PF K		
C11			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		
C13			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C14			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C21 ,22			CQ92FM1H163J	MYLAR 0.016UF J	YMX	
C21 ,22			CQ92FM1H243J	MYLAR 0.024UF J	KRP	
C23			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C24			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C25			CE04LW1V100M	ELECTRO 10UF 35WV		
C27			CK73FB1E473K	CHIP C 0.047UF K		
C28			CE04LW1V100M	ELECTRO 10UF 35WV		
C31			CE04LW1A470M	ELECTRO 47UF 10WV		
C32			CK73FB1H103K	CHIP C 0.010UF K		
C33			CC73FCH1H270J	CHIP C 27PF J		
C34			CC73FCH1H220J	CHIP C 22PF J		
C35 -38			CK73FB1H471K	CHIP C 470PF K		
C39			CE04LW1C470M	ELECTRO 47UF 16WV		
C40			CK73FB1H223K	CHIP C 0.022UF K		
C41			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C42 ,43			CK73FB1H103K	CHIP C 0.010UF K		
C50			C91-0769-05	CERAMIC 0.010UF K		
C51			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C52			CE04LW1C470M	ELECTRO 47UF 16WV		
C57			CC73FSL1H220J	CHIP C 22PF J		
C65			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C66			CK73FB1H102K	CHIP C 1000PF K		
C71			CE04LW1V100M	ELECTRO 10UF 35WV		
C72			CE04LW1C470M	ELECTRO 47UF 16WV		
C103-106			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C107			CK73FB1E473K	CHIP C 0.047UF K		
C112			CC73FSL1H101J	CHIP C 100PF J		

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PARTS LIST

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NO.3

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
C114			CK73FB1H681K	CHIP C 680PF K		
C115,116			CC73FSL1H101J	CHIP C 100PF J		
C121,122			CE04LW1C470M	ELECTRO 47UF 16WV		
C135,136			CQ92FM1H682J	MYLAR 6800PF J	YM	
C182			CC73FSL1H150J	CHIP C 15PF J		
CN1			E40-4234-05	FLAT CABLE CONNCTOR		
J1			E20-0476-05	LOCK TERMINAL BOARD(4P)		
CF1 ,2			L72-0531-05	CERAMIC FILTER		
CF3			L72-0574-05	CERAMIC FILTER		
L7			L30-0467-05	AM IFT		
L10			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L11			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
L12			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L103			L39-1328-05	COMBINATION COIL		
L106			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
X1			L77-1122-05	CRYSTAL RESONATOR(7.2MHz)		
X2			L78-0295-05	RESONATOR (456kHz)		
R11			RS14KB3A820J	FL-PROOF RS 82 J 1W		
R31			RS14KB3D221J	FL-PROOF RS 220 J 2W		
R42			RD14NB2E101J	RD 100 J 1/4W		
R111			RD14NB2E470J	RD 47 J 1/4W		
R127,128			RD14NB2E101J	RD 100 J 1/4W		
W46			R92-0670-05	CHIP R 0 OHM		
W48			R92-0670-05	CHIP R 0 OHM		
S101			S62-0034-05	SLIDE SWITCH	YM	
D3			HZS5.1N(B2)	ZENER DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D4			HZS3.3N(B2)	ZENER DIODE		
D4			RD3.3ES(B2)	ZENER DIODE		
D7			MA110	DIODE		
D8 ,9			HSS104	DIODE		
D8 ,9			1SS133	DIODE		
D11			HZS8.2N(B2)	ZENER DIODE		
D11			RD8.2ES(B2)	ZENER DIODE		
D111,112			MA110	DIODE		
IC1			LA1831A-KEN	ANALOGUE IC		
IC2			LC7218	IC(PLL FREQUENCY SYNTHESIZER)		
IC12			NJM4565D	IC(OP AMP X2)		
Q1			2SC2714(R,O)	TRANSISTOR		
Q2			2SC1845(F,E)	TRANSISTOR		
Q3			2SC1740S(Q,R)	TRANSISTOR		
Q3			2SC2785(F,E)	TRANSISTOR		
Q7			2SC2412K	TRANSISTOR		
Q11			2SD863(E,F)	TRANSISTOR		
Q102			2SA1037K	TRANSISTOR		
Q104			2SA1037K	TRANSISTOR		
Q107-110			2SC2412K	TRANSISTOR	YM	
Q109,110			2SC2412K	TRANSISTOR	KRPX	
Q111			2SA1037K	TRANSISTOR		
DT1			W02-2512-05	FM FRONT-END ASSY		
TUNER UNIT(X05-4532-74)						
C1 ,2			CK73FB1H103K	CHIP C 0.010UF K		

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NO.4

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
C3			CE04LW1V100M	ELECTRO 10UF 35WV		
C4			CK73FB1E473K	CHIP C 0.047UF K		
C5			CE04LW1V100M	ELECTRO 10UF 35WV		
C6			CK73FB1E473K	CHIP C 0.047UF K		
C7			CE04LW1V100M	ELECTRO 10UF 35WV		
C8			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C9			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C10			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C11			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C12			CK73FB1E473K	CHIP C 0.047UF K		
C13			CC73FCH1H220J	CHIP C 22PF J		
C14			CE04LW1A101M	ELECTRO 100UF 10WV		
C15			CK73FB1H472K	CHIP C 4700PF K		
C16			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C17 ,18			CE04LW1V100M	ELECTRO 10UF 35WV		
C19 ,20			CQ92FM1H273J	MYLAR 0.027UF J		
C21			CK73FB1H103K	CHIP C 0.010UF K		
C22			CC73FSL1H101J	CHIP C 100PF J		
C23 ,24			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C25 ,26			CK73FB1H562K	CHIP C 5600PF K		
C27			CK73FB1E473K	CHIP C 0.047UF K		
C28			CC73FSL1H150J	CHIP C 15PF J		
C30			CE04LW1C470M	ELECTRO 47UF 16WV		
C31			CK73FB1E473K	CHIP C 0.047UF K		
C32			CK73FB1H103K	CHIP C 0.010UF K		
C33			CC73FCH1H270J	CHIP C 27PF J		
C34			CC73FCH1H220J	CHIP C 22PF J		
C35 -38			CC73FSL1H101J	CHIP C 100PF J		
C39			CE04LW1C470M	ELECTRO 47UF 16WV		
C40			CQ92FM1H223J	MYLAR 0.022UF J		
C41			CE04HW1H2R2M	NP-ELEC 2.2UF 50WV		
C42 ,43			CK73FB1H103K	CHIP C 0.010UF K		
C44			CE04LW1A470M	ELECTRO 47UF 10WV		
C45			CE04LW1C470M	ELECTRO 47UF 16WV		
C46			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C47			CK73FB1H103K	CHIP C 0.010UF K		
C48			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C49			CK73FB1H103K	CHIP C 0.010UF K		
C55			CK73FB1H222K	CHIP C 2200PF K		
C56			CC73FCH1H060D	CHIP C 6.0PF D		
C57			CC73FCH1H220J	CHIP C 22PF J		
C58			CK73FB1E473K	CHIP C 0.047UF K		
C60			CC73FSL1H101J	CHIP C 100PF J		
C61			C91-0745-05	CERAMIC 100PF K		
C62			CC45FSL1H020C	CERAMIC 2.0PF C		
CN1			E40-4234-05	FLAT CABLE CONNCTOR		
J1			E20-0321-05	LOCK TERMINAL BOARD		
CF1 ,2			L72-0536-05	CERAMIC FILTER		
L1 ,2			L79-1219-05	LC FILTER		
L3			L30-0910-05	FM IFT		
L5			L79-0125-05	LC FILTER		
L6			L39-1328-05	COMBINATION COIL		
L7			L30-0467-05	AM IFT		
L8 ,9			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		

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NO.5

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
L11			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
X1			L77-1122-05	CRYSTAL RESONATOR(7.2MHz)		
X2			L78-0295-05	RESONATOR (456kHz)		
R42			RD14NB2E101J	RD 100 J 1/4W		
R78			RD14NB2E470J	RD 47 J 1/4W		
R79			RS14KB3D221J	FL-PROOF RS 220 J 2W		
W101-106			R92-0670-05	CHIP R 0 OHM		
W108-112			R92-0670-05	CHIP R 0 OHM		
W114-119			R92-0670-05	CHIP R 0 OHM		
W121,122			R92-0670-05	CHIP R 0 OHM		
W201-203			R92-0679-05	CHIP R 0 OHM		
W207,208			R92-0679-05	CHIP R 0 OHM		
D1 ,2			HSS104	DIODE		
D1 ,2			1SS133	DIODE		
D3			MTZJ5.1(B)	ZENER DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D4			MTZJ8.2(B)	ZENER DIODE		
D4			RD8.2ES(B2)	ZENER DIODE		
D5			HSS104	DIODE		
D5			1SS133	DIODE		
D6			MTZJ3.3(B)	ZENER DIODE		
D6			RD3.3ES(B2)	ZENER DIODE		
IC1			LA1836	ANALOGUE IC		
IC2			LC7218	IC(PLL FREQUENCY SYNTHESIZER)		
Q1			2SC2714(R,O)	TRANSISTOR		
Q2			2SC1845(F,E)	TRANSISTOR		
Q3 -5			2SC4081(R,S)	TRANSISTOR		
Q7 ,8			2SA1576(R,S)	TRANSISTOR		
Q9			2SD863(E,F)	TRANSISTOR		
Q10			2SA1576(R,S)	TRANSISTOR		
Q11 ,12			2SD1757K	TRANSISTOR		
A1			W02-2509-05	FM FRONT-END ASSY		
CONTROL UNIT(X11-355X-XX)						
C1 ,2			CE04LW1E102M	ELECTRO 1000UF 25WV		
C3 ,4			CE04LW1E101M	ELECTRO 100UF 25WV		
C5 ,6			CE04LW1V100M	ELECTRO 10UF 35WV		
C7			CE04LW1V101M	ELECTRO 100UF 35WV		
C8			CE04LW1V100M	ELECTRO 10UF 35WV		
C9			CE04LW1H331M	ELECTRO 330UF 50WV		
C10			CE04LW1E102M	ELECTRO 1000UF 25WV		
C11 ,12			CE04LW1V101M	ELECTRO 100UF 35WV		
C13			CE04LW1H220M	ELECTRO 22UF 50WV		
C14			CK45FF1H103Z	CERAMIC 0.010UF Z		
C15 ,16			CC45FSL1H221J	CERAMIC 220PF J		
C17 -19			CE04LW1V471M	ELECTRO 470UF 35WV		
C20 ,21			CC45FSL1H470J	CERAMIC 47PF J		
C22			CK45FF1H103Z	CERAMIC 0.010UF Z		
C23 -32			CC45FSL1H221J	CERAMIC 220PF J		
C33 -38			CE04LW1V100M	ELECTRO 10UF 35WV		
C39 ,40			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C41 ,42			CC45FSL1H470J	CERAMIC 47PF J		
C43			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C44			CK45FF1H223Z	CERAMIC 0.022UF Z		

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NO.6

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
C45			CE04LW1V100M	ELECTRO 10UF 35WV		
C46			CC45FSL1H220J	CERAMIC 22PF J		
C47			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C48			CK45FF1H223Z	CERAMIC 0.022UF Z		
C49 ,50			CC45FSL1H330J	CERAMIC 33PF J	EG	
C51			CF92FV1H124J	MF-C 0.12UF J	EG	
C53			CK45FF1H103Z	CERAMIC 0.010UF Z	EG	
C54 ,55			CF92FV1H124J	MF-C 0.12UF J		
C56			CE04LW1V471M	ELECTRO 470UF 35WV		
C57			CK45FF1H103Z	CERAMIC 0.010UF Z		
C60			CE04LW1V100M	ELECTRO 10UF 35WV		
C61			CK45FF1H103Z	CERAMIC 0.010UF Z		
C62			CE04LW1V100M	ELECTRO 10UF 35WV		
C65			CE04LW1A470M	ELECTRO 47UF 10WV		
C66			CQ93FMG1H473J	MYLAR 0.047UF J		
C67 ,68			CF92FV1H124J	MF-C 0.12UF J		
C124			CE04LW1A101M	ELECTRO 100UF 10WV	YM	
C125			CK45FF1H103Z	CERAMIC 0.010UF Z	YM	
C131			CQ93FMG1H222J	MYLAR 2200PF J	YM	
C132			CQ93FMG1H103J	MYLAR 0.010UF J	YM	
C133			CF92FV1H124J	MF-C 0.12UF J	YM	
C134,135			CF92FV1H224J	MF-C 0.22UF J	YM	
C136			CE04LW1H010M	ELECTRO 1.0UF 50WV	YM	
C137			CE04LW1HR47M	ELECTRO 0.47UF 50WV	YM	
C138			CQ93FMG1H103J	MYLAR 0.010UF J	YM	
C139			CQ93FMG1H222J	MYLAR 2200PF J	YM	
C140			CF92FV1H124J	MF-C 0.12UF J	YM	
C141			CE04LW1A470M	ELECTRO 47UF 10WV	YM	
C142			CC45FCH1H101J	CERAMIC 100PF J	YM	
C143			CE04LW1HR47M	ELECTRO 0.47UF 50WV	YM	
C144			CE04LW1C101M	ELECTRO 100UF 16WV	YM	
C145			CK45FB1H102K	CERAMIC 1000PF K	YM	
C146			CE04LW1HR47M	ELECTRO 0.47UF 50WV	YM	
C147,148			CE04LW1H010M	ELECTRO 1.0UF 50WV	YM	
C151,152			CK45FF1H103Z	CERAMIC 0.010UF Z		
C201,202			CK45FB1H102K	CERAMIC 1000PF K		
C203,204			CF92FV1H124J	MF-C 0.12UF J		
C205			C90-3244-05	ELECTRO 10UF 35WV		
C206			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C207			C90-3244-05	ELECTRO 10UF 35WV		
C209			C90-3222-05	ELECTRO 100UF 10WV		
C211			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C212			CK45FB1H102K	CERAMIC 1000PF K		
C213			C90-3224-05	ELECTRO 4.7UF 16WV		
C214			C90-3228-05	ELECTRO 47UF 16WV		
C215,216			CK45FB1H102K	CERAMIC 1000PF K		
C221			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C222			CF92FV1H124J	MF-C 0.12UF J		
C223			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C224			CF92FV1H124J	MF-C 0.12UF J		
C225			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C226			CK45FF1H103Z	CERAMIC 0.010UF Z		
C227			CF92FV1H124J	MF-C 0.12UF J		
C228			C90-3216-05	ELECTRO 330UF 6.3WV		
C229			C90-3222-05	ELECTRO 100UF 10WV		

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NO.7

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti- nation 仕向	Re- marks 備考
C230			CF92FV1H124J	MF-C 0.12UF J		
C231,232			CQ93FMG1H223J	MYLAR 0.022UF J		
C233			CC45FCH1H180J	CERAMIC 18PF J		
C234			CC45FCH1H220J	CERAMIC 22PF J		
C235			CE04LW1A101M	ELECTRO 100UF 10WV		
C240			C90-3222-05	ELECTRO 100UF 10WV		
C241			CK45FF1H103Z	CERAMIC 0.010UF Z		
C242			CK45FB1H102K	CERAMIC 1000PF K		
C243			CK45FF1H103Z	CERAMIC 0.010UF Z		
C244			C90-3222-05	ELECTRO 100UF 10WV		
CN1		⁎	E40-4952-05	FLAT CABLE CONNCTOR (27P)		
CN2		⁎	E40-4914-05	FLAT CABLE CONNCTOR (27P)		
J1			E58-0006-05	RECTANGULAR RECEPTACLE (19P)		
J2			E63-0068-15	PHONO JACK (2P) MD/AUX		
J6 ,7			E11-0262-05	MINIATURE PHONE JACK MIC1/MIC2		
L2 ,3			L40-1011-17	SMALL FIXED INDUCTOR(100UH,K)		
X1			L77-2140-05	CRYSTAL RESONATOR(32.768kHz)		
X2			L78-0290-05	RESONATOR (8MHz)		
R120			RS14KB3D221J	FL-PROOF RS 220 J 2W	YM	
R199			RS14KB3D152J	FL-PROOF RS 1.5K J 2W		
VR1		⁎	R31-0038-05	VARIABLE RESISTOR (10K)		
VR2			R31-0002-05	VARIABLE RESISTOR (50K)	YMXEG	
S1 -5			S40-1064-05	PUSH SWITCH		
S6			S40-1064-05	PUSH SWITCH DIGITAL ECHO	YM	
S7			S40-1064-05	PUSH SWITCH DISPLAY		
S11		⁎	T99-0558-05	ROTARY ENCODER TUNING		
⚠ D1 -6			S5688B	DIODE		
⚠ D1 -6			1SR139-100	DIODE		
D7			HZS6.2N(B2)	ZENER DIODE		
D7			RD6.2ES(B2)	ZENER DIODE		
D8			HZS5.1N(B2)	ZENER DIODE		
D8			RD5.1ES(B2)	ZENER DIODE		
D9			HZS5.1N(B2)	ZENER DIODE	YM	
D9			RD5.1ES(B2)	ZENER DIODE	YM	
⚠ D10			S5688B	DIODE		
⚠ D10			1SR139-100	DIODE		
D11 ,12			HZS13N(B2)	ZENER DIODE		
D11 ,12			RD13ES(B2)	ZENER DIODE		
D14 ,15			HZS16N(B2)	ZENER DIODE		
D14 ,15			RD16ES(B2)	ZENER DIODE		
D16			HSS104A	DIODE		
D16			1SS131	DIODE		
D17			HZS16N(B2)	ZENER DIODE		
D17			RD16ES(B2)	ZENER DIODE		
D19 -31			HSS104A	DIODE		
D19 -31			1SS131	DIODE		
D33 -35			HSS104A	DIODE		
D33 -35			1SS131	DIODE		
D37 -40			HSS104A	DIODE		
D37 -40			1SS131	DIODE		
D41 -44			HZS3.9N(B2)	DIODE	EG	
D41 -44			RD3.9ES(B2)	DIODE	EG	
D101			HSS104A	DIODE		

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NO.8

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D101			1SS131	DIODE		
D104			HSS104A	DIODE	KRP	
D104			1SS131	DIODE	KRP	
ED1		⁎	FIP10EMW6R	INDICATOR TUBE		
IC1			NJU7313AL	ANALOGUE IC		
IC1			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC2			NJM4565L-D	IC(OP AMP X2)		
IC3 ,4			NJM4565D-D	IC(OP AMP X2)		
IC3 ,4			XRA15218-DX	IC(OP AMP X2)		
IC5			M65844P	DI BI-POLAR IC	YM	
IC6			NJM4565D-D	IC(OP AMP X2)	YM	
IC6			XRA15218-DX	IC(OP AMP X2)	YM	
IC101		⁎	CXP82440A-116Q	MI-COM IC		
IC102		⁎	PST9140-T	ANALOGUE IC		
IC103			XR-1091ECP	IC(GE FILTER)		
IC104			NJM4565L-D	IC(OP AMP X2)		
⚠ Q1			2SD2012	TRANSISTOR		
⚠ Q1			2SD2061	TRANSISTOR		
⚠ Q2			2SB1370	TRANSISTOR		
⚠ Q2			2SB1375	TRANSISTOR		
⚠ Q5			2SB1370	TRANSISTOR		
⚠ Q5			2SB1375	TRANSISTOR		
⚠ Q12			2SD2012	TRANSISTOR		
⚠ Q12			2SD2061	TRANSISTOR		
Q31 ,32			2SC1740S(Q,R)	TRANSISTOR		
Q31 ,32			2SC2785(F,E)	TRANSISTOR		

L: Scandinavia	**K**: USA	**P**: Canada **R**: Mexico	S : SINGAPORE MADE
Y: PX(Far East, Hawaii)	**T**: England	**E**: Europe **G**: Germany	W : MALAYSIA MADE
Y: AAFES (Europe)	**X**: Australia	**M**: Other Areas	⚠ indicates safety critical components.

SPECIFICATION

For Europe

FM tuner section

Tuning frequency range	87.5 MHz ~ 108 MHz
Sensitivity (DIN at 75 Ω)	
MONO	1.2 µV / 13.2 dBf
Signal to noise ratio (at 1 kHz) (DIN weighted at 1 kHz, 65.2 dBf input)	
MONO	65 dB
STEREO	62 dB
Selectivity (DIN ± 300 kHz)	64 dB
Stereo separation (DIN at 1 kHz)	40 dB
Frequency response (30 Hz ~ 15 kHz)	+ 0.5 dB, -3 dB

MW tuner section

Tuning frequency range	531 kHz ~ 1,602 kHz
Usable sensitivity	12 µV / (500 µV/m)
Signal to noise ratio	48 dB

General

Dimensions	W : 270 mm H : 104 mm D : 334 mm
Weight (Net)	2.0 kg

INSTRUCTION MANUAL

UD-503/553

ENGLISH	B60-2059-00	KP
FRENCH	B60-2060-00	P
FRENCH	B60-2052-00	E
GERMAN	B60-2053-00	EG
DUTCH	B60-2054-00	E
ITALIAN	B60-2055-00	E
SPANISH	B60-2056-00	E
SPANISH	B60-2061-00	R

UD-613/663

ENGLISH	B60-2051-00	YMX
SPANISH	B60-2261-00	M
CHINESE	B60-2057-00	M
TAIWANESE	B60-2058-00	M

UD-703/753

ENGLISH	B60-2066-00	KPT
FRENCH	B60-2067-00	PE
GERMAN	B60-2068-00	EG
DUTCH	B60-2069-00	E
ITALIAN	B60-2070-00	E
SPANISH	B60-2071-00	RE
For RDS	B60-2074-00	TEG

UD-713/763

ENGLISH	B60-2259-00	YMX
SPANISH	B60-2260-00	M
CHINESE	B60-2072-00	M
TAIWANESE	B60-2073-00	M

For Other countries

FM tuner section

Tuning frequency range	87.5 MHz ~ 108 MHz
Sensitivity (IHF)	13.2dBf (1.2µV at 75 Ω)
Signal to noise ratio (at 1 kHz)	
MONO	75 dB (65 dBf input)
STEREO	68 dB (65 dBf input)
Selectivity (IHF ± 400 kHz)	50 dB
Stereo separation (IHF at 1 kHz)	40 dB
Frequency response (30 Hz ~ 15 kHz)	+ 0.5 dB, -3 dB

MW tuner section

Tuning frequency range	
9kHz step	531 kHz ~ 1,602 kHz
10 kHz step	531 kHz ~ 1,610 kHz
Usable sensitivity	12 µV / (500 µV/m)
Signal to noise ratio	48 dB

General

Dimensions	W : 270 mm (10 -5/8") H : 104 mm (4 -1/8") D : 334 mm (13 -1/8")
Weight (Net)	2.0 kg (4.4 lb)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Note:
Component and circuity are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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